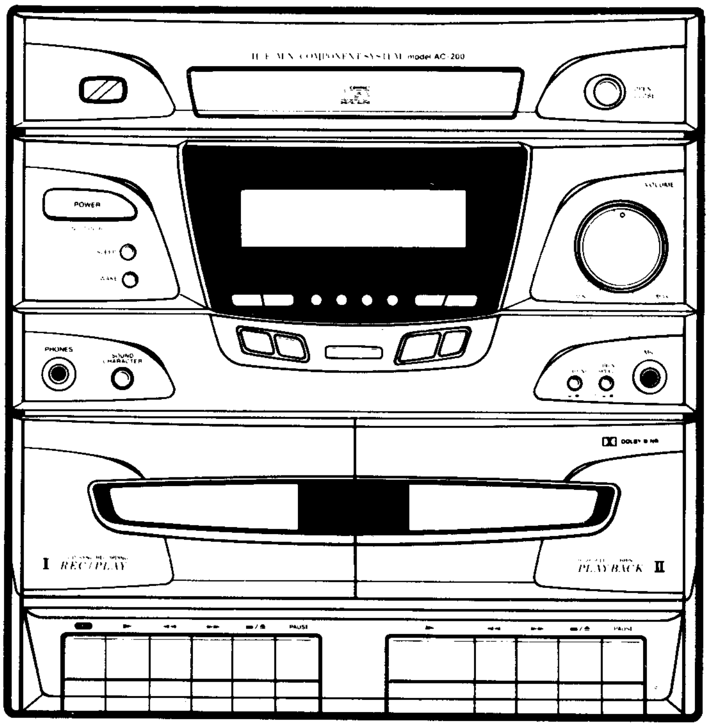
AKAI SERVICE MANUAL


POWER
PHONES
SOUND CHARACTER
VOLUME
I REC/PLAY
PLAYBACK II
PAUSE
PAUSE

COMPACT disc DIGITAL AUDIO

MINI COMPONENT SYSTEM

AC-200
SR-200

CONTENTS

[AC-200]

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[SR-200]

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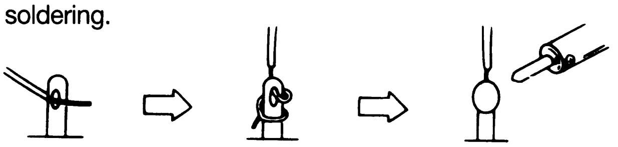
SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the⚠ (∗)symbol parts are critical for safety. Replace them only with parts whose numbers are specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples:RF converters, tuner units, antenna selection switches, RF cables, noise-blocking capacitors, noise-blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulating Tape
   2) PVC tubing
   3) Spacers(insulating barriers)
   4) Insulating sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Make sure that wires do not contact heat generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check if replaced wires do not contact sharply edged or pointed parts.
8. Also check areas surrounding repaired parts.
9. Make sure that foreign objects (screws, solder droplets, etc,) do not remain inside the set.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can. Please leave them at an appropriate depot. All other household batteries can be thrown out with the household waste.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to check if exposed parts are acceptably insulated from the supply circuit.

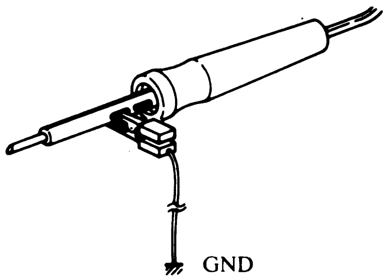
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15μF capacitor, under the unit's normal working condition.

The leakage-current should be less than 0.5mA rms AC.
The resistance measurement should be done between accesible exposed metal parts and power cord plug prongs with the power switch "ON"(if included). The resistance should be more than 2.2Mohms.

PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment, make sure that there are no metal objects between the P.C board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs may be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.

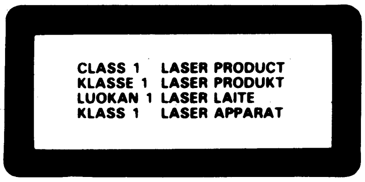


4. Do not loosen any screws in the pick-up block.
   Please refer to NOTE when replacing the pick up block.
5. To avoid hazardous invisible Laser Radiation, DO NOT look at the Laser Beam (Objective lens) directly.
6. On models for some countries, laser warning labels are affixed on and inside of the unit, as shown below. For your safety, read these labels carefully before repairing or adjusting the unit.

CAUTION

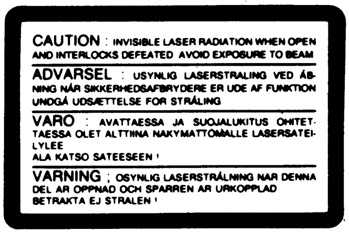
The use of controls or adjustments or the performance of procedures other than those specified herein may result in hazardous radiation.

[EUROPE, SCANDINAVIA, UK and AUSTRALIA]



CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT

Label affixed on the rear panel of the unit



CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED AVOID EXPOSURE TO BEAM

ADVARSEL : USYNLIG LASERSTRALING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING

VARO : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NAKYMATTOMALLE LASERSATEILYLEE
ALA KATSO SATEESEEN !

VARNING ; OSYNLIG LASERSTRÅLNING NAR DENNA DEL AR OPPNAD OCH SPARREN AR URKOPPLAD BETRAKTA EJ STRALEN !

Label affixed on the CD MECHA BLOCK

INFORMATIONS

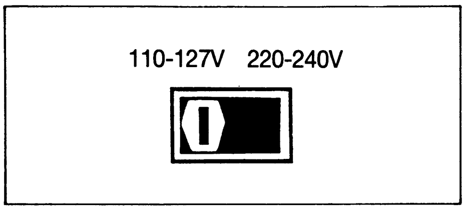
SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Prinncipal Destination
A	USA
B	UK
E	Europe(except, UK)
S	Australia
V	Germany
U	Universal
Y*	Custom version

VOLTAGE CONVERSION (U Y Model only)

Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel of the AC-200 so that the correct voltage for your area is indicated.



[U, Y_1, Y_2, Y_3, Y_4, Y_7]

SPECIFICATIONS

[Tuner Section]

Frequency range	
FM	87.5-108MHz(50KHz step)
MW	531-1602KHz(9KHz step) [E / V / S / B / U_5 / Y_1 / Y_3 / Y_7] 530-1610KHz(10KHz step) [U_8 / Y_2 / Y_4]
LW	144-288KHz(1KHz step)
SW	3.8-12.5MHz(5KHz step)
Sensitivity	
FM	6μV(IHF, THD 3%) [EXCEPT V] 12μV(IHF, THD 3%) [V]
MW	1000μV(IHF, THD 10%)
LW	3000μV(IHF, THD 10%)
SW	17μV(IHF, THD 10%)
S/N ratio(IHF)	
FM	Mono:65dB Stereo:60dB
MW	40dB
LW	30dB
SW	40dB
Total Harmonic distortion(at 1KHz)	
FM	Mono:1.0% Stereo:1.5%
MW	1.5%
LW	3.5%
SW	3.5%
Stereo separation	35dB(at 1KHz)

[AMPLIFIER Section]

Power output	25W+25W(6 ohm, 1KHz, 10% THD, EIAJ) 20W+20W(6 ohm, 1KHz, 1% THD, DIN)
Total harmonic distortion	0.05%(−10dB for RMS)
Input sensitivity	
MD/VCR	400mV/47K ohms
S/N ratio	
MD/VCR	75dB
Channel separation	55dB

SPECIFICATIONS

[Deck Section]

Track system	4 track, 2 channel system
Frequency response	100-10,000Hz ±3dB
Wow & Flutter	0.2%(WRMS)
S/N ratio	51dB
Total harmonic distortion	1.0%(Normal tape, at 400Hz)
Channel separation	40dB

[CD Section]

Pick up system	3 Beam laser
Sampling frequency	44.1KHz
Error correction system	Cross interleave reed solomon
Number of channels	2 Channel
Frequency response	20Hz~20KHz
S/N ratio	90dB
Wow & flutter	Below measurable limits
Total harmonic distortion	0.08% (at 1KHz)
Channel separation	80dB (at 1KHz)
Dynamic range	85dB (at 1KHz)

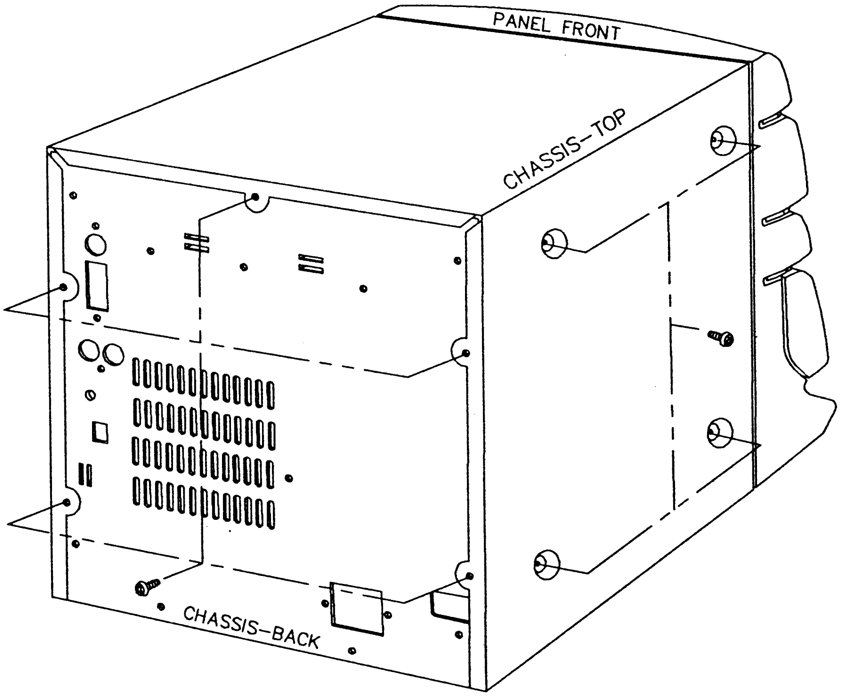
[General]

Power requirement	
E/V	AC 220-230V/50Hz
B	AC 230V/50Hz
S	AC 240V/50Hz
U/Y_1/Y_2/Y_3/Y_4/Y_7	AC 110-127V, 220-240V/50, 60Hz
Power consumption	60W
Dimension	270(W)×280(H)×328(D)mm
Weight	8.2Kg

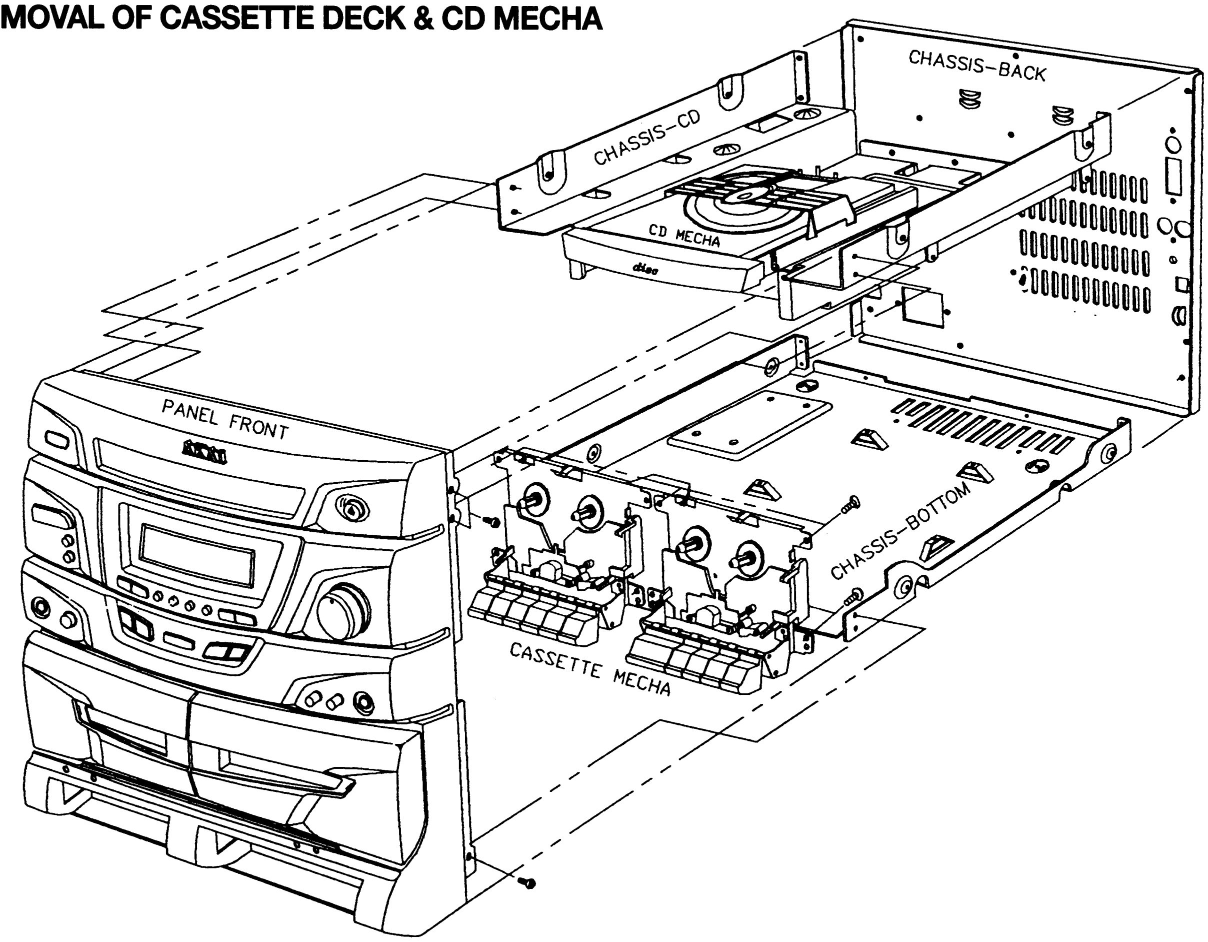
∗ For improvement purposes, specifications and design are subject to change without notice.

I. DISASSEMBLY

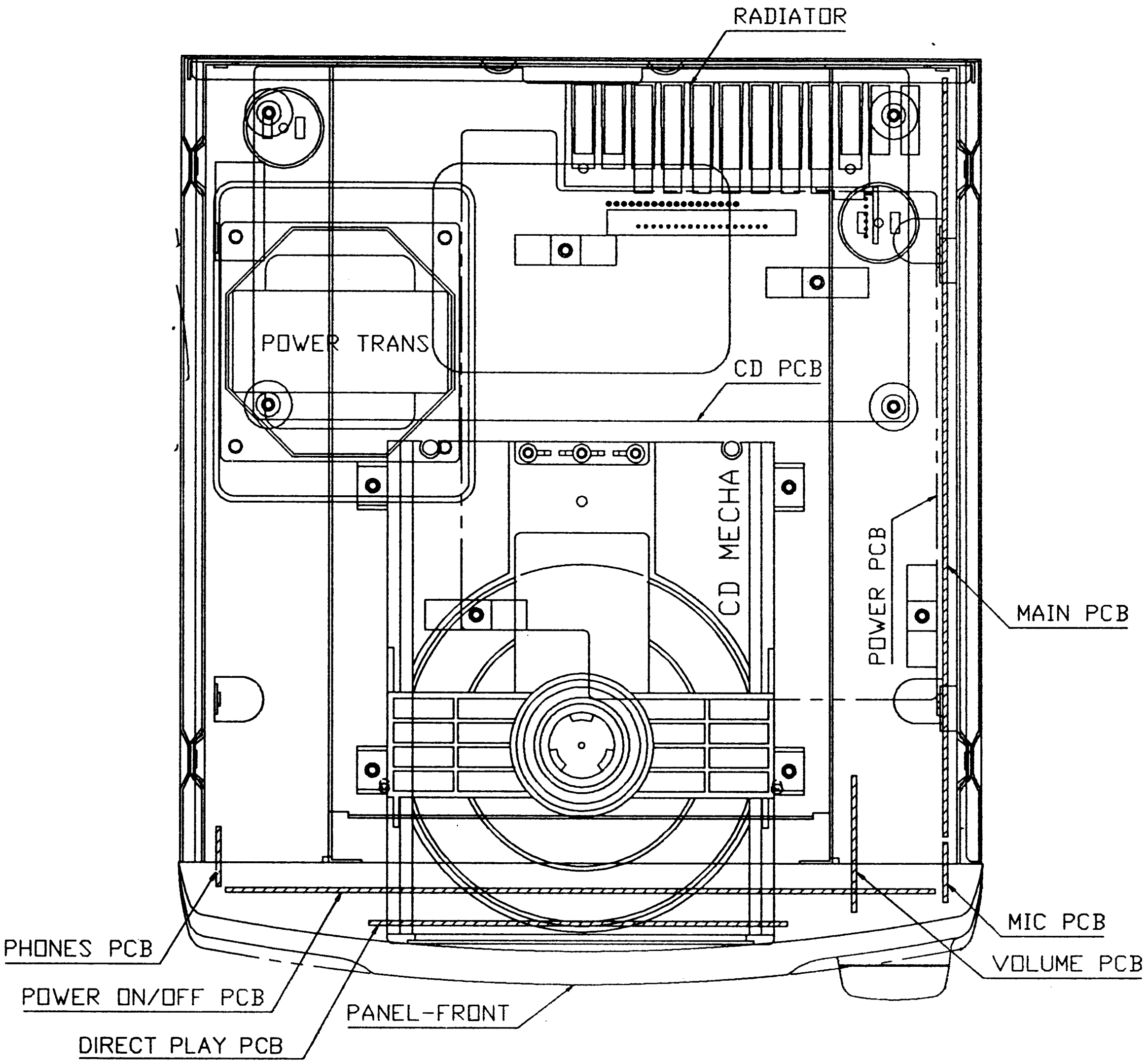
1. REMOVAL OF COVER-TOP


PANEL FRONT
CHASSIS-TOP
CHASSIS-BACK

2. REMOVAL OF CASSETTE DECK & CD MECHA


CHASSIS-BACK
CHASSIS-CD
CD MECHA
PANEL FRONT
AKAI
CHASSIS-BOTTOM
CASSETTE MECHA

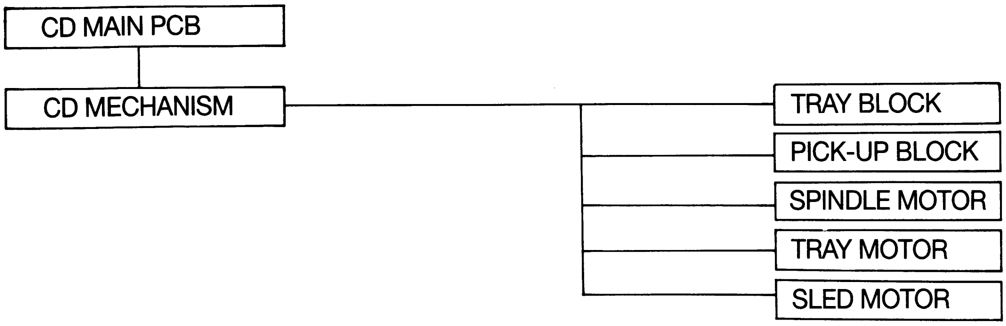
II. PRINCIPAL PARTS LOCATION


RADIATOR
POWER TRANS
CD PCB
CD MECHA
POWER PCB
MAIN PCB
MIC PCB
VOLUME PCB
PHONES PCB
POWER ON/OFF PCB
PANEL-FRONT
DIRECT PLAY PCB

III. REPLACEMENT OF PRINCIPAL MECHANICAL PARTS

CD MECHANISM

1. DISMANTLING PROCEDURE OF THE COMPONENTS


CD MAIN PCB
CD MECHANISM
TRAY BLOCK
PICK-UP BLOCK
SPINDLE MOTOR
TRAY MOTOR
SLED MOTOR

2.REMOVAL OF THE CD MAIN PCB

1) Disconnect the four connectors carefully (These are on the CD PCB. fig 1. CN601, CN602, CN605, CN606).

3.REMOVAL OF THE CD MECHANISM

1) Remove the four retaining screws, then remove the CD mecha. unit (fig 2)

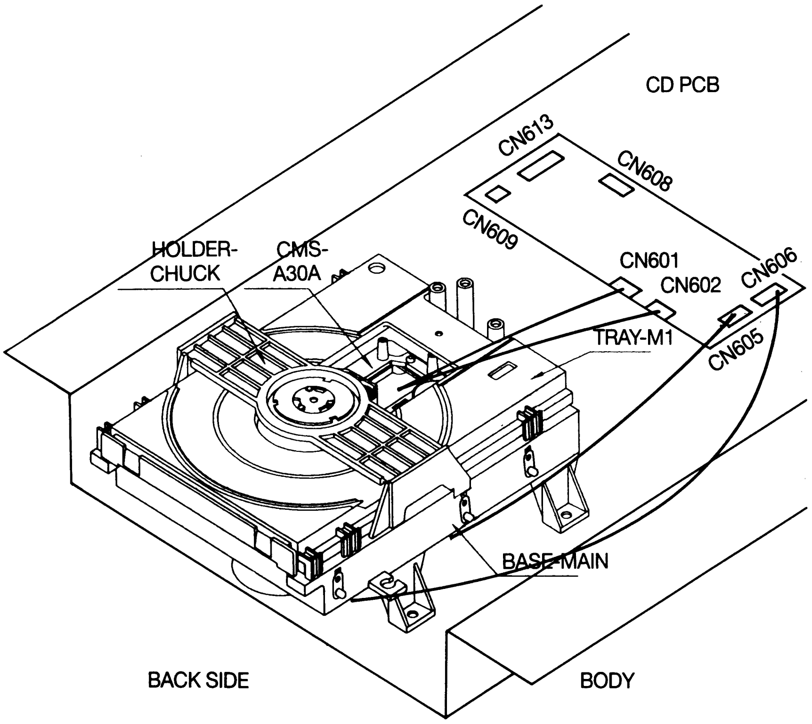
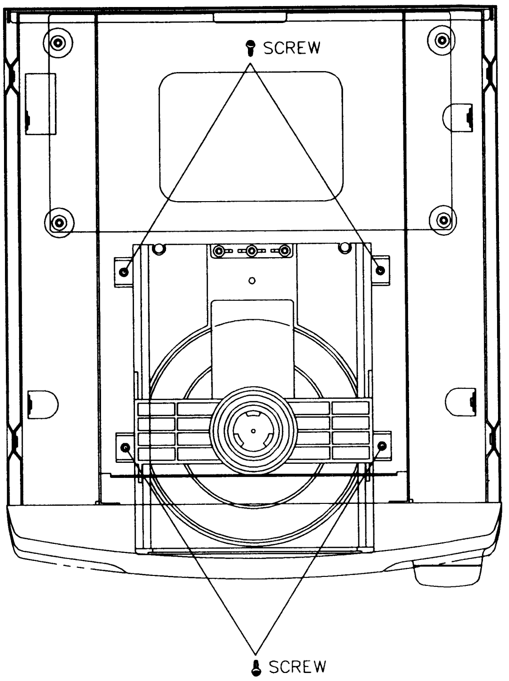

CD PCB
CN613
CN608
CN609
CN601
CN602
CN606
CN605
HOLDER-CHUCK
CMS-A30A
TRAY-M1
BASE-MAIN
BACK SIDE
BODY

Fig. 1


SCREW
SCREW

4.REMOVAL OF THE TRAY BLOCK

1) Remove the four retaining screws for clamper and tray. (fig. 3)

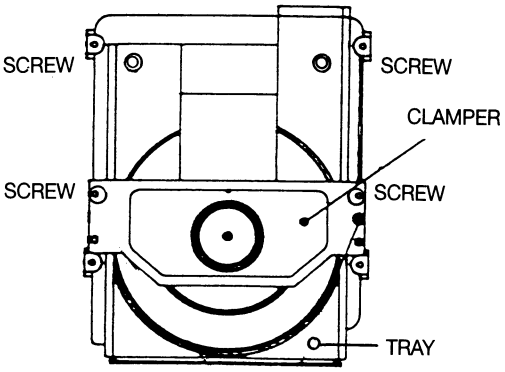


Fig. 3

2) Slide the bracket in the direction of the arrow (fig. 4)

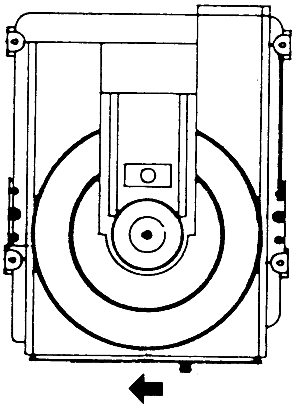


Fig. 4

3) Pull out the tray ass'y slowly in the direction of the arrow (fig. 5)

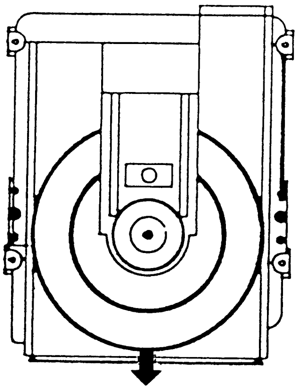


Fig. 5

4) Remove the tray block.

5.REPLACEMENT OF THE TRAY MOTOR

1) Remove the tray-belt
2) Unsolder the lead wires and PCB of the tran-motor with a soldering-iron.
3) Remove the tray-motor retaining screws.
4) Remove and replace the tray-motor.
5) Reassemble in the reverse order.

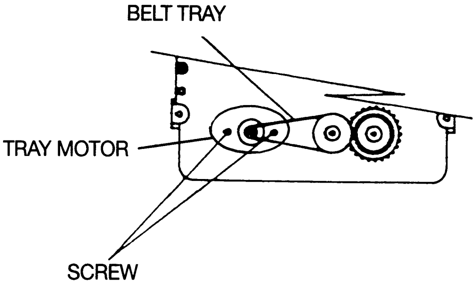


Fig. 6

6.REPLACEMENT OF THE SLED-MOTOR & REPLACEMENT OF THE SPINDLE -MOTOR

- Remove the four SHAFT CD and the four RUBBER CD for ASS'Y-MECHA FEED.
- Replacement of the spindle-motor itself is not recommended, because the adjustment of the turn table height is quite critical and necessitating the use of a special jig.
- Therefore, when need to replace the spindle-motor, please replace with a ASS'Y-MECHA FEED. (CD MECHA;CMS-A30A:ADCD-00110-031)

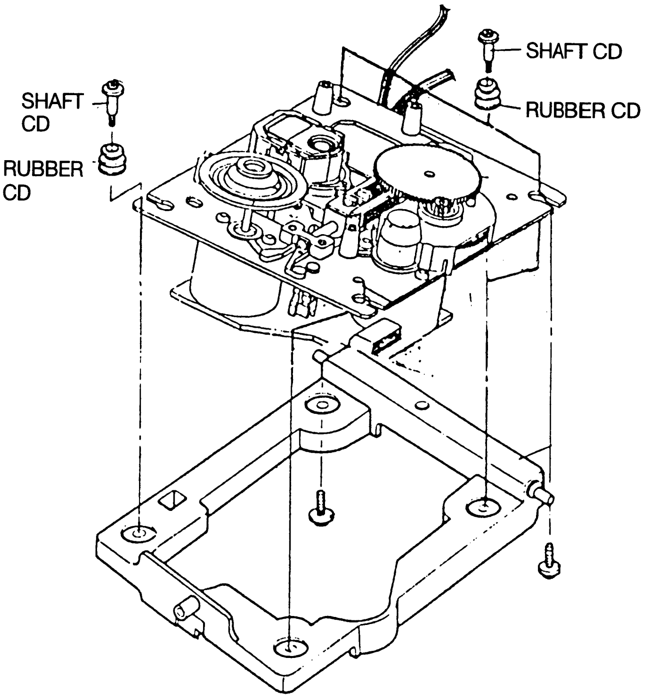


Fig. 7

2. CASSETTE DECK MECHANISM

2-1. REPLACEMENT OF THE PINCH ROLLER BLOCK

1) Pull the PINCH ROLLER BLOCK upward(⬆) while releasing the PINCH ROLLER RETAINING HOOK.
2) Reassemble in the reverse order.

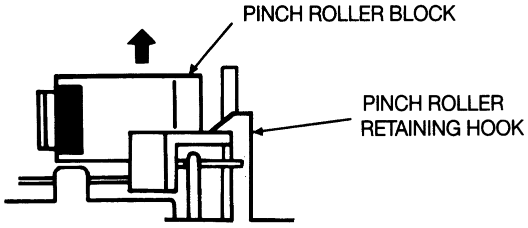

PINCH ROLLER BLOCK
PINCH ROLLER RETAINING HOOK

Fig. 2-1

2-2. REPLACEMENT OF THE PB HEAD (TAPE II)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all the lead wires with a soldering iron, then replace the PB HEAD.
3) Reassemble in the reverse order. After replacement, head azimuth and PB level adjustment must be performed.

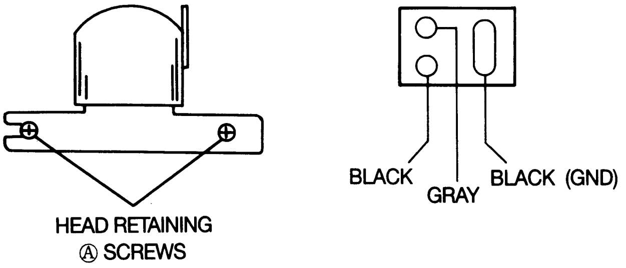

BLACK
GRAY
BLACK (GND)
HEAD RETAINING
Ⓐ SCREWS

Fig. 2-2

2-3. REPLACEMENT OF THE REC/PB HEAD (TAPE I)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all lead wires with a soldering iron, then replace the REC/PB HEAD.
3) Reassemble in the reverse order, After replacement, head azimuth, PB level BIAS current and REC level adjustments must be performed.

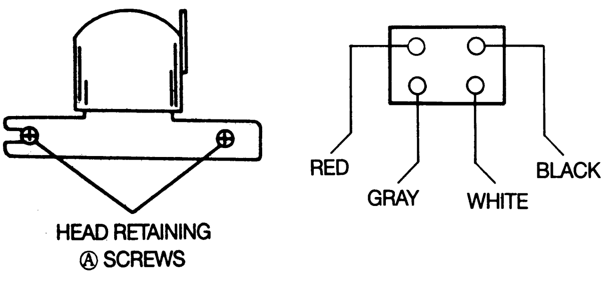

RED
GRAY
WHITE
BLACK
HEAD RETAINING
Ⓐ SCREWS

Fig. 2-3

2-4. REPLACEMENT OF THE CAPSTAN MOTOR

1) Remove the CAPSTAN MOTOR RETAINING Ⓐ SCREWS, then replace the CAPSTAN MOTOR.
2) Reassemble in the reverse order and set the DRIVE BELT. After replacement, tape speed adjustment must be performed.

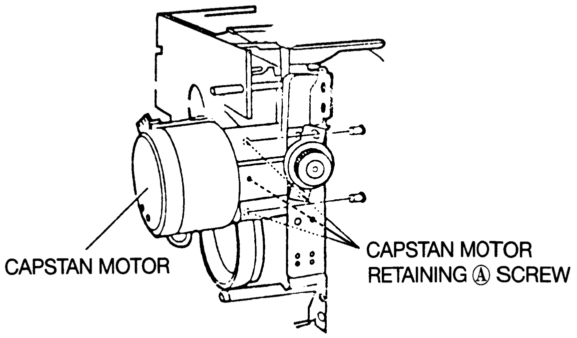

CAPSTAN MOTOR
CAPSTAN MOTOR RETAINING Ⓐ SCREW

Fig. 2-4

2-5. REPLACEMENT OF THE DRIVE BELT

1) Remove the MOTOR RETAINING Ⓑ SCREWS and separate the MECHANISM-A and B. Replace the DRIVE BELT.
2) Reassemble in the reverse order. After replacement, confirm the tape speed and if the result is not satisfactory, adjust the tape speed.

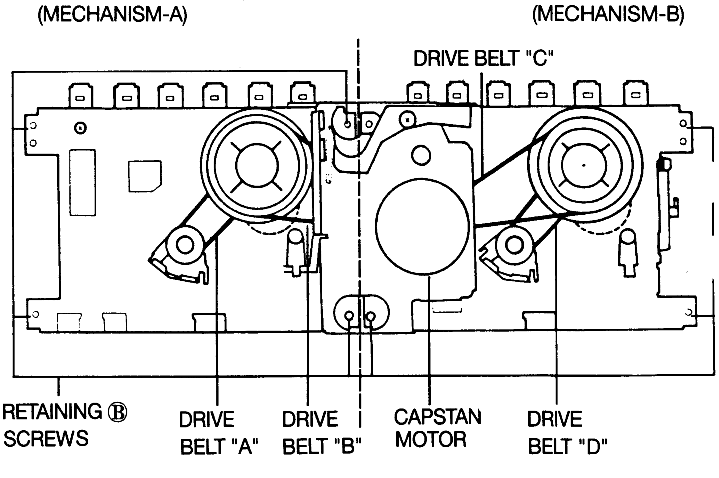

(MECHANISM-A)
(MECHANISM-B)
DRIVE BELT "C"
RETAINING Ⓑ SCREWS
DRIVE BELT "A"
DRIVE BELT "B"
CAPSTAN MOTOR
DRIVE BELT "D"

Fig. 2-5

2-6. ADJUSTMENT OF THE PB HEAD AND REC/PB HEAD AZIMUTH ALIGNMENT (TAPE Ⅰ & Ⅱ)

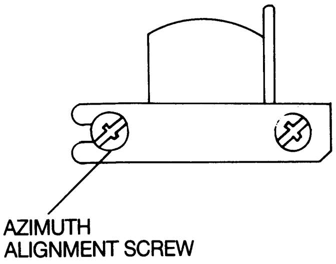
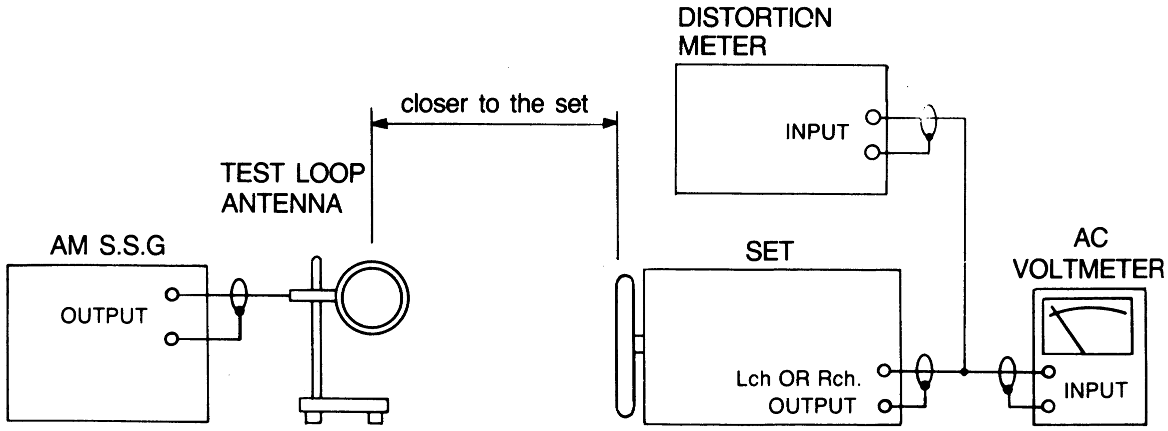


Fig. 2-6

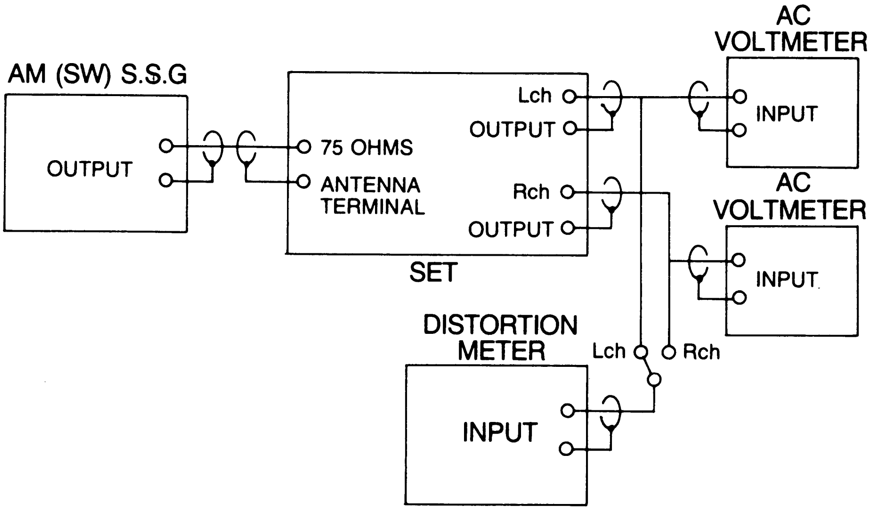
1) Connect an AC milli-voltmeter to the TEST POINT TP401 refer to the illustration on page(17) and connect an oscilloscope's input CH-1 and CH-2 to the output of the AC milli-voltmeters.
2) Play back the 10kHz, HEAD AZIMUTH ALIGNMENT TEST TAPE(MTT-357G) then adjust the PB HEAD AZIMUTH ALIGNMENT SCREW respectively so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase.

IV. ADJUSTMENT

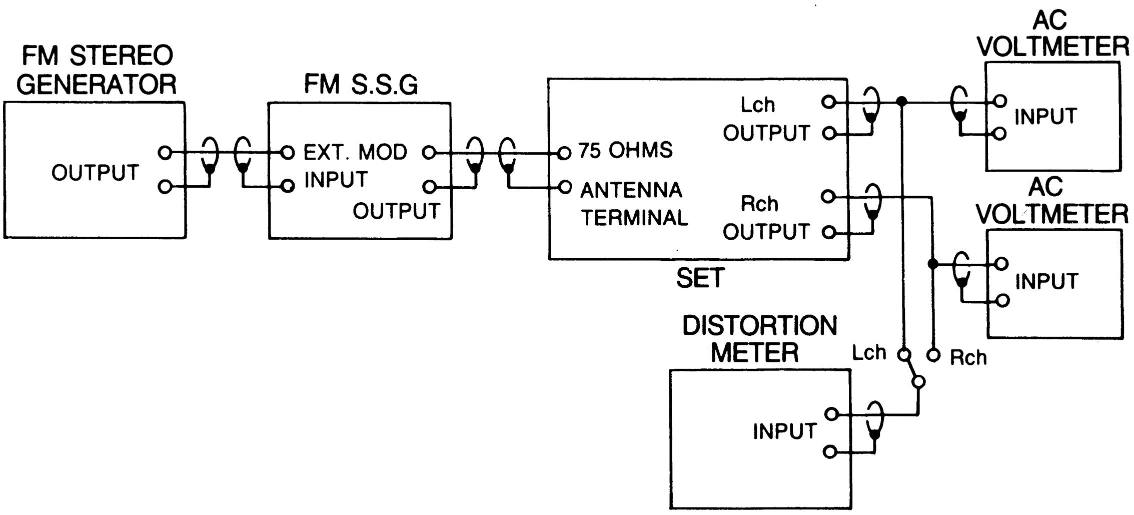
1. TUNER INSTRUMENT CONNECTIONS


DISTORTION METER
INPUT
closer to the set
TEST LOOP ANTENNA
AM S.S.G
OUTPUT
SET
AC VOLTMETER
Lch OR Rch. OUTPUT
INPUT

Instrument connection for AM (MW, LW) section adjustment


AC VOLTMETER
AM (SW) S.S.G
OUTPUT
Lch OUTPUT
75 OHMS ANTENNA TERMINAL
INPUT
Rch OUTPUT
AC VOLTMETER
INPUT
SET
DISTORTION METER
Lch
Rch
INPUT

Instrument connection for AM (SW) section adjustment


AC VOLTMETER
FM STEREO GENERATOR
FM S.S.G
OUTPUT
EXT. MOD INPUT
OUTPUT
Lch OUTPUT
75 OHMS ANTENNA TERMINAL
INPUT
Rch OUTPUT
AC VOLTMETER
INPUT
SET
DISTORTION METER
Lch
Rch
INPUT

Instrument connection for FM section adjustment

2. TUNER ELECTRICAL ADJUSTMENT

NOTE: 1. Set the S.S.G. to 1KHz, 75KHz deviation for $\boxed{U}$, $\boxed{S}$, $\boxed{B}$, $\boxed{Y}$, $\boxed{V_2}$ or $\boxed{E}$ model, 1KHz, 40KHz deviation for $\boxed{V_1}$ model.

STEP	**ADJUSTMENT**

1. TEST CONDITIONS
2. MODE
3. CHECK POINT, ADJUSTMENT PART
4. REMARK(●) and RESULT(*)

*Speaker out Level = Reference 5 watts.

Test Point　　Adjustment Part

FM

3 DISTORTION(STEREO)

1. 98.0MHz, 60dBμ(STEREO L or R channel only)
2. 98.0MHz
3. IFT (FRONT END) / (FE201)
4. ● Connect the distortion meter to SPEAKER OUT.
   *Minimum Distortion

1 CENTER VOLTAGE

1. 98.0MHz, 60dBμ(MONO)
2. 98.0MHz PRESET 3ch
3. T206
4. ● Connect the DC Digital Voltmeter to ends of R252 and GND
   * ±50mV for "0" VOLT

2 TUNING LED

1. 98.0MHz, 20dBμ(MONO)
2. 98.0MHz(MONO, preset-3ch)
3. "TUNED" on the LC display/SV202
4. * "TUNED" on the LC display is lit.

4 STEREO SEPARATION

1. 98.0MHz, 60dBμ(STEREO L or R channel only)
2. 98.0MHz, PRESET 3ch
3. SV201
4. ● Connect the AC milli-volmeter to SPEAKER OUT.
   *Minimum output level for opposite channel.

LW <SW>

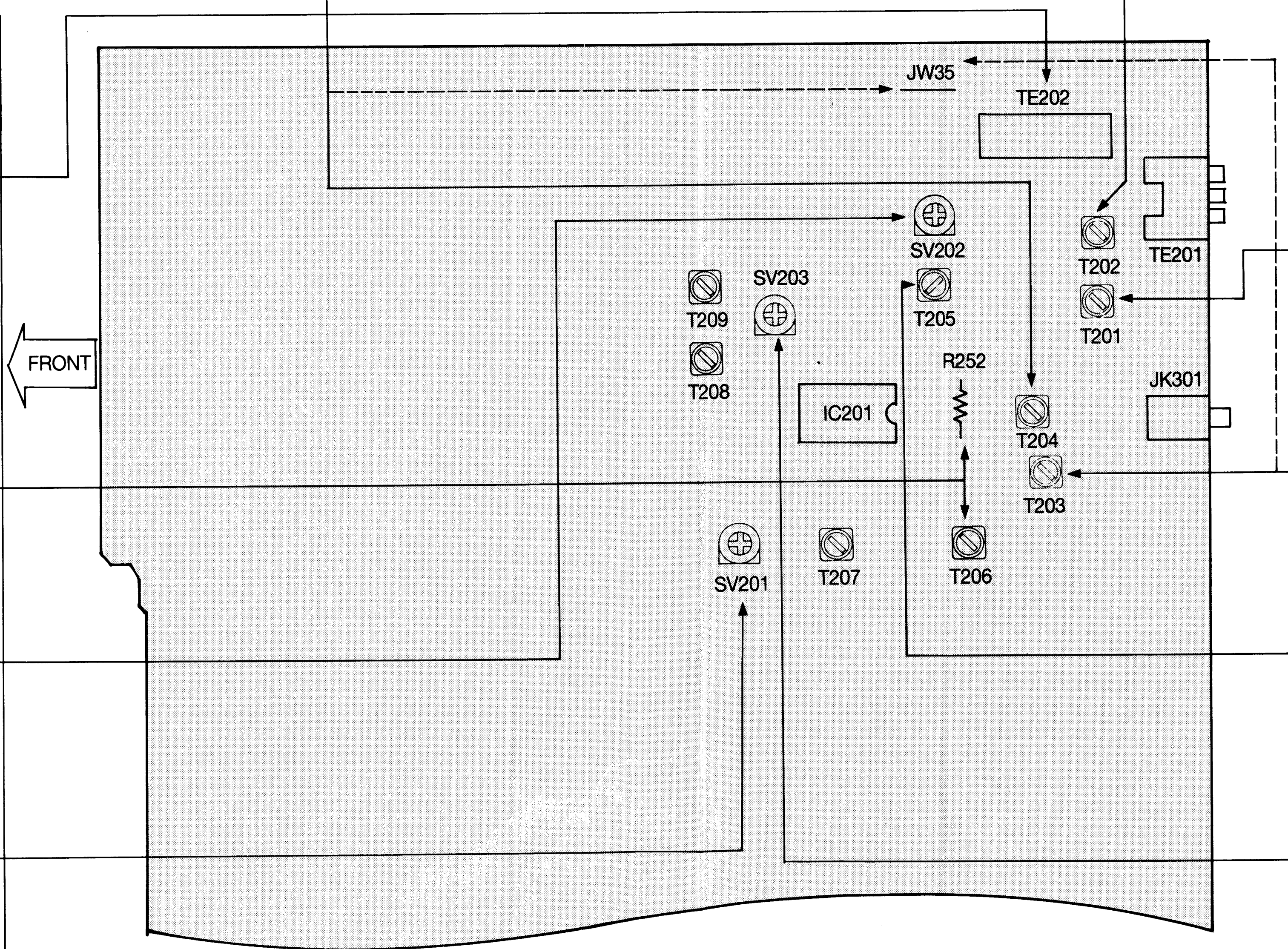
NOTE: 1. Set the S.S.G to 1KHz 30% modulation on each adjustment.
2. Frequencies indicated in < > are for the SW model.

1 LW <SW> OSC

1. Set the S.S.G to 1KHz 30% modulation
2. 144KHz <3.8MHz> (preset 11ch) <11ch>
3. T204
4. ● Connect the Digital DC Voltmeter between JW35 and GND.
   *1.0V ± 0.1V

2 LW <SW> SENSITIVITY

1. Low-160KHz, 70dBμ <4MHz, 35dBμ>
   High-260KHz, 70dBμ <12MHz, 35dBμ>
2. Low-160KHz PRESET 12ch <4MHz>
   High-260KHz PRESET 14ch <12MHz>
3. T202
4. ● Connect the AC milli-Voltmeter to SPEAKER OUT.
   *Maximum output level and minimum distortion
   *For best result, repeat Low a High adjustment several times.



<BOTTOM VIEW>
MAIN P.C BOARD (A1U-309)

AM

NOTE: Set the S.S.G to 1KHz 30% modulation on each adjustment.

2 AM(MW) SENSITIVITY

1. 603KHz, 60dBμ(LOW) or 1,404KHz, 60dBμ
2. 603KHz(LOW), (PRESET 9ch)
3. T201
4. ● Connect the AC milli-Voltmeter to SPEAKER OUT.
   *Maximum output level. & minimum distortion
   *For best result, repeat Low a High adjustments several times.

1 AM(MW) OSC

1. Set the S.S.G to 1KHz 30% modulation
2. 531KHz(PRESET 6ch)
3. T203
4. ● Connect the Digital DC Voltmeter to between JW35 and GND.
   *1.0V ± 0.1V

3 AM IF

1. 603KHz, 60dBμ
2. 603KHz
3. T205
4. ● Connect the milli-Voltmeter to SPEAKER OUT.
   *Maximum output level.

4 TUNING LED

1. 603KHz, 60dBμ
2. 603KHz
3. "TUNED" on the LC display/SV203
4. * "TUNED" on the LC display is lit.

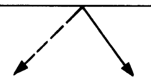
3. CD ELECTRICAL ADJUSTMENT

∗ Test mode can be selected the following method

1. While pressing the TUNING DOWN key and skip-(▶▶I)
2. Insert the AC Cord.

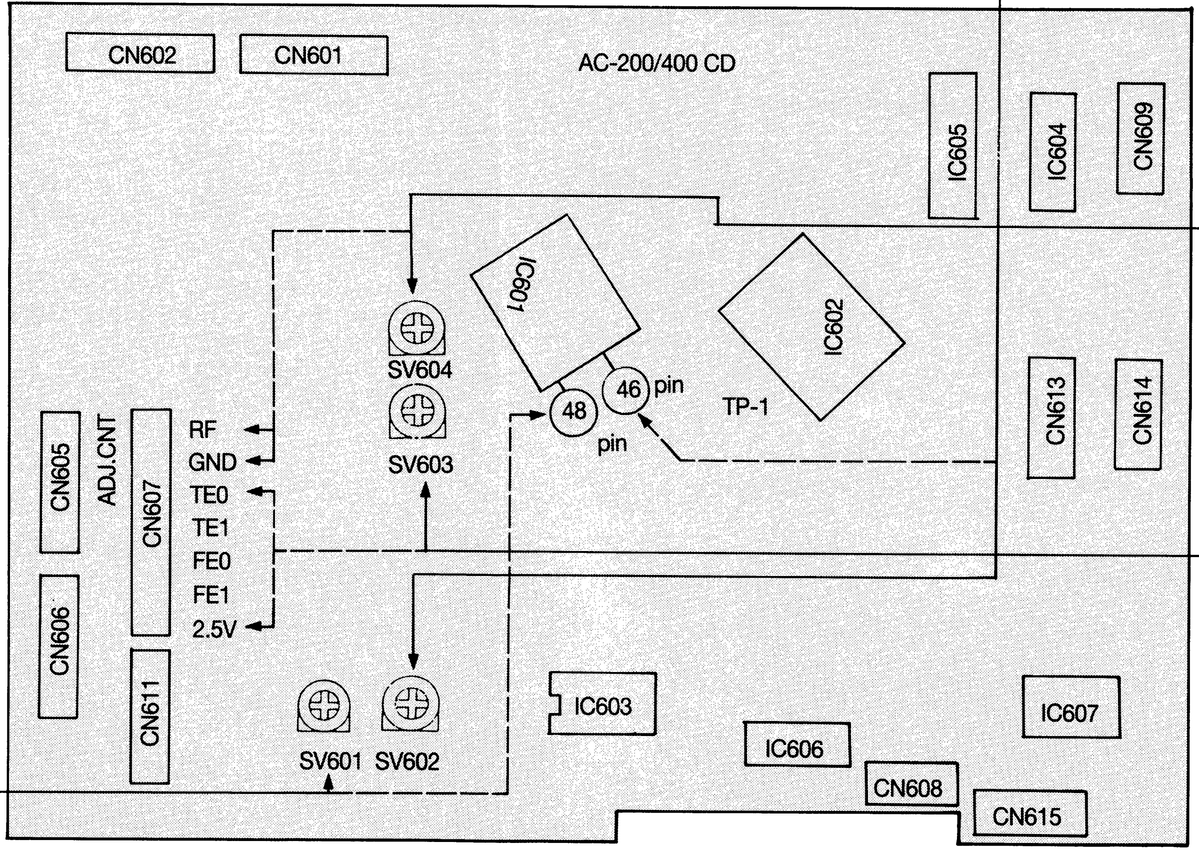
STEP **ADJUSTMENT**

1. TEST DISC
2. MODE or TEST mode
3. TEST POINT and ADJUSTMENT parts.
4. REMARK(●) and RESULT(∗)


Test Point
Adjustment Part

TEST MODE	HOW TO SET EACH MODE	FUNCTION	MUSIC CALEN -DER
1	Press the PLAY/ PAUSE button	● FOCUS SERVO is on.	1
2	Press the PLAY/ PAUSE button	● CLV-S SERVO is on.	2
3	Press the PLAY/ PAUSE button	● TRACKING SERVO is on.	3
4	Press the PLAY/ PAUSE button	● CLV-A and SLED SERVO are on.	4
5	Press the PLAY/ PAUSE button	● ANTI SHOCK is on.	5

∗ After the TEST MODE5, press the STOP button to return to STOP.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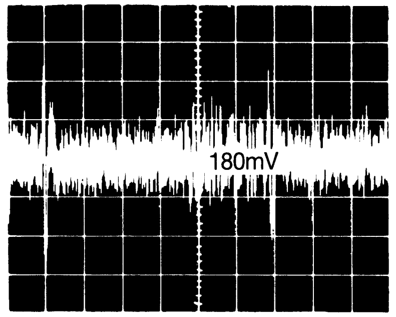
CN601
AC-200/400 CD
IC605
IC604
CN609
IC601
IC602
SV604
SV603
46 pin
48 pin
TP-1
CN605
ADJ.CNT
CN607
RF
GND
TE0
TE1
FE0
FE1
2.5V
CN613
CN614
CN606
CN611
SV601
SV602
IC603
IC606
IC607
CN608
CN615

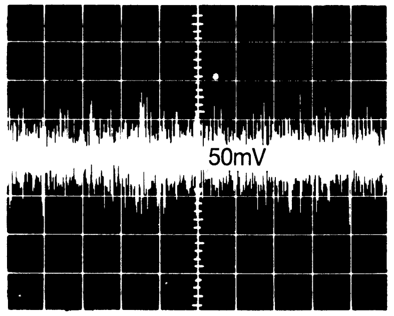
4 TRACKING SERVO GAIN

1. Test disc A-BEX TCD-781
2. Test mode 3
3. IC601 48pin/SV601
4. ● Connect an oscilloscope to the IC601 48pin.
   ∗180mV



3 FOCUS SERVO GAIN

1. Test disc A-BEX TCD-781
2. Test mode 3
3. IC601 46pin/SV602
4. ● Connect an oscilloscope to the IC601 46pin
   ∗50mV

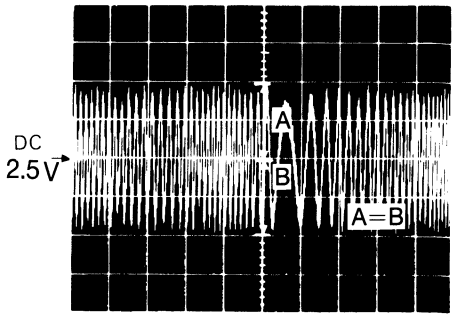


1 FOCUS BIAS

1. Test disc A-BEX TCD-781
2. Test mode 2 and 1
3. CN607(1, 2pin)/SV604
4. ● Connect an oscilloscope to the RF and GND Press PLAY button and adjust the RF signal to maximum
   ∗1.4V p-p

2 E-F BALANCE

1. Test disc A-BEX TCD-781
2. Test mode 3
3. CN607(3, 7pin)/SV603
4. ● Connect an oscilloscope to the TE0 or TE1 and 2.5V(CN607 7pin)
   ● Short CN613 while adjusting SV603 then, remove it after the adjustment
   ∗A=B



4. CASSETTE DECK ELECTRICAL ADJUSTMENT

[PRECAUTIONS BEFORE ADJUSTMENT]

1. Before adjustment, clean and de-magnetize the heads and tape guides.
2. Set the Dolby NR switch off.
3. Use the following recording test tapes.
   NORMAL position : TDK AC-224
   CrO2 position : TDK AC-513
4. DOLBY LINE OUT =TP401

STEP **ADJUSTMENT**

1. TEST TAPE/TEST CONDITION
2. MODE
3. CHECK POINT/ADJUSTMENT PART
4. REMARK(●) and RESULT(∗)

Test Point Adjustment Part

8 NORMAL POSITION BIAS

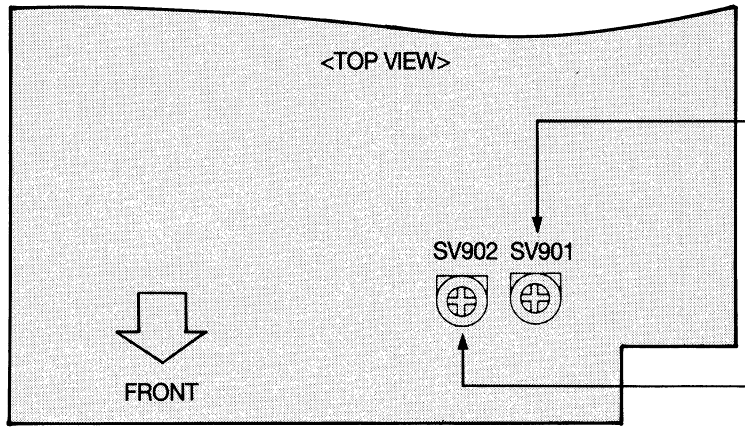
1. 1KHz and 10KHz, −26dBs(DOLBY OUT) NORMAL recording test tape(AC-224)
2. REC → PLAY(REC input 1KHz and, 10KHz at the function MD/VCR)
3. DOLBY OUT/SV407(R-CH), SV408(L-CH)
4. ● Connect an AC milli-voltmeter between DOLBY OUT(TP401)
   ∗ Playback levels of 1KHz and 10KHz are equal or within +/−1.0dB

6 BIAS OSC FREQUENCY

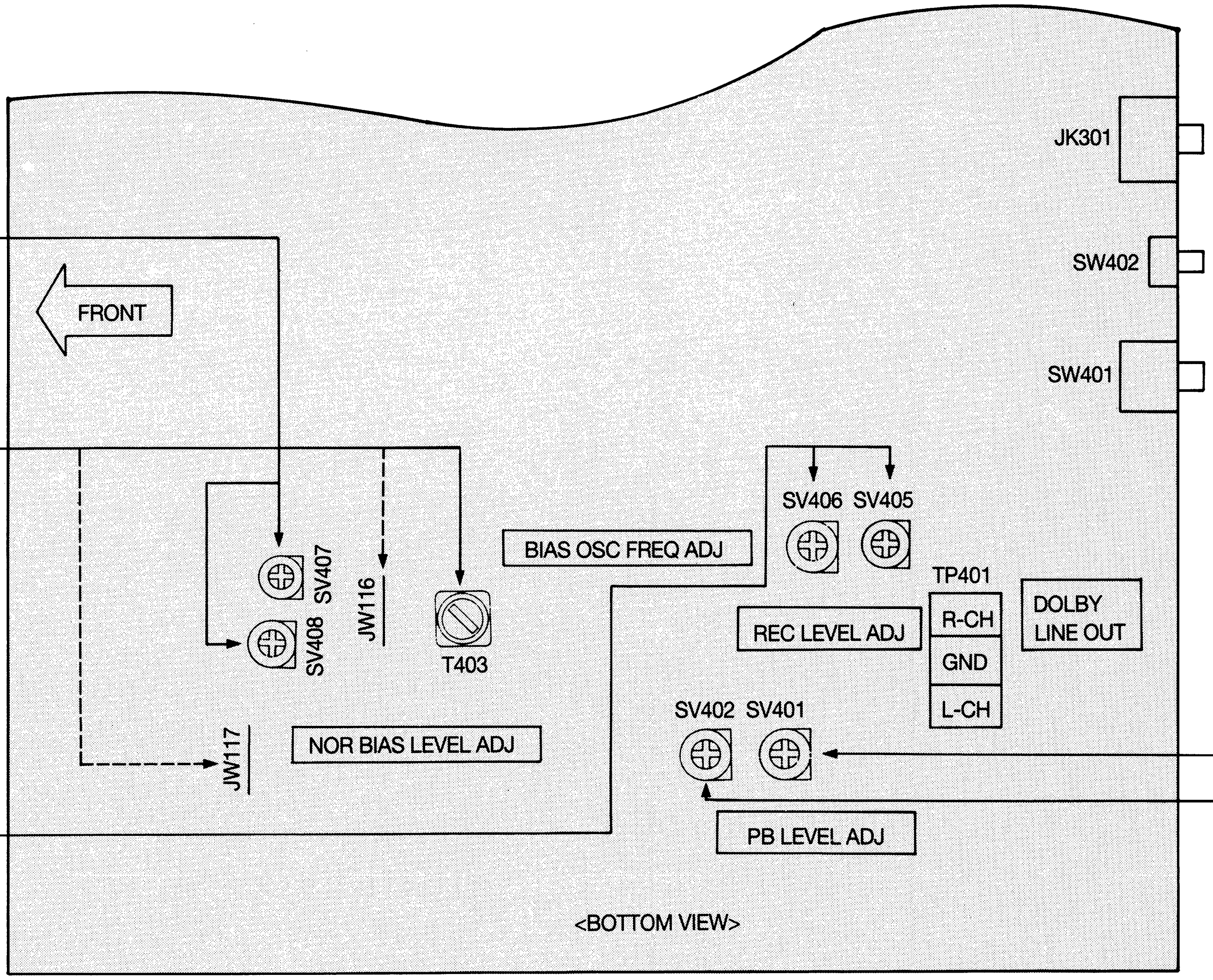
1. No input signal, CrO2 recording test tape. (AC-513)
2. REC(at setting BEAT CUT SW 2)
3. JW116/T403(REC OSC COIL)
4. ● Connect a frequency counter between JW116 signal and JW117 GND.
   ∗ 100KHz ± 5KHz

7 RECORDING LEVEL

1. NORMAL tape(AC-224), input signal 1KHz at the function MD/VCR, −6dBs for DOLBY LEVEL
2. REC → PLAY
3. DOLBY OUT(TP401)/SV405(R-CH), SV406(L-CH)
4. ● Connect an AC milli-voltmeter to DOLBY OUT(TP401)
   ∗ −6dBs ± 1dBs



AMP POWER P.C BOARD (A2U-151A)



MAIN P.C BOARD (A1U-309)

1 TAPE Ⅱ HIGH (×2) SPEED

1. 3,000Hz test tape (MTT-111DN)
2. TAPE Ⅱ :play, TAPE Ⅰ :REC and HIGH DUBBING
3. DOLBY OUT(TP401)/SV901
4. ● Connect a frequency counter to DOLBY OUT(TP401)
   ∗ 6000Hz ± 60Hz

2 TAPE Ⅱ NORMAL(×1) SPEED

1. 3,000Hz test tape(MTT-111DN)
2. PLAY
3. DOLBY OUT(TP401)/SV902
4. ● Connect an AC milli-voltmeter to DOLBY OUT(TP401)
   ∗ 3000Hz ± 30Hz

3 HEAD AZIMUTH ALIGNMENT(TAPE Ⅰ & Ⅱ)

1. 10KHz test tape (MTT-357G)
2. PLAY
3. DOLBY OUT(TP401)/AZIMUTH ALIGNMENT SCREW
4. ● Connect an AC milli-voltmeter to DOLBY OUT(TP401)
   ∗ Maximum output level.

4 TAPE Ⅱ PB LEVEL

1. 400Hz test tape(MTT-150)
2. PLAY
3. DOLBY OUT(TP401)/SV402(L-ch)
4. ● Connect an AC milli-voltmeter to DOLBY OUT(TP401)
   ∗ 580mV

5 TAPE Ⅰ PB LEVEL

1. 400Hz test tape(MTT-150)
2. PLAY
3. DOLBY OUT(TP401)/SV401(L-ch)
4. ● Connect an AC milli-voltmeter to DOLBY OUT(TP401)
   ∗ 580mV

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No, Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

[NOTE]

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.

WARNING

⚠(*) INDICATED SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

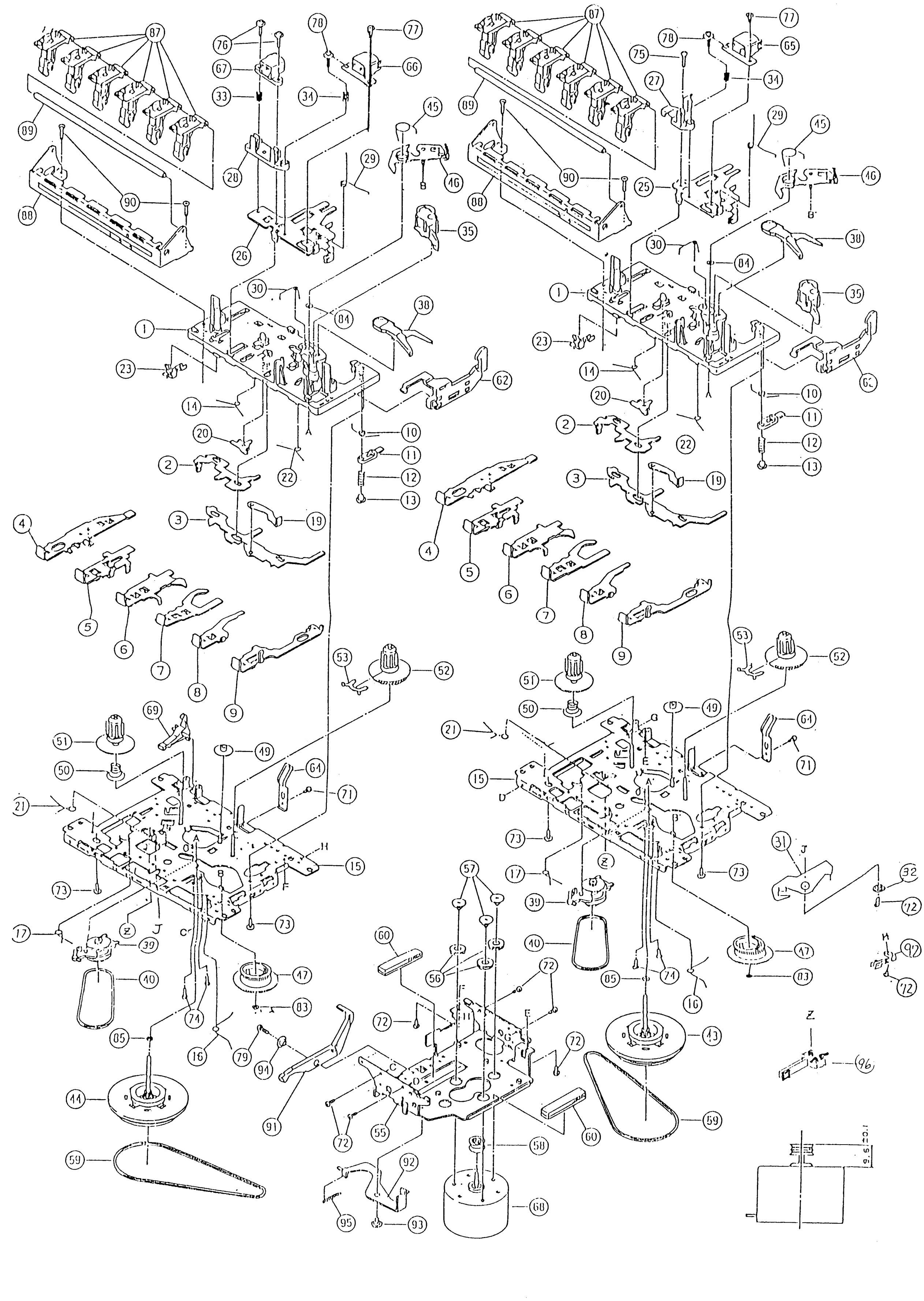
⚠(*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMEND SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service

Ref. No.	Part No.	Description
1	* KDAC-0230F-6N8	CORD-AC [E, V, U, Y] KKP419C KLCE-2F 0.75 CE
2	* KDAC-0270E-4FB	CORD-AC[B] CW3201(5A)H03VVH2F 2 × 0.75
3	* KDAC-0220F-2VA	CORD-AC[S] KKP-560 KLCE-2F 0.75CE
4	DECA-00186-00P	MECHA CASSETTE TN-21ZSW-1262
5	DECD-00111-01F	MECHA CDP CMS-A3G6TK
6	* FGFB-S2002-137	FUSE GLASS 2A 250V FST034.3120 T
7	* FGFB-S8001-137	FUSE GLASS 800mA 250V FST0034.3116 T
8	LLA3-06900-B10	CARD CABLE KF2B 31/90 P6 S4 B3
9	LLA3-07381-E10	CARD CABLE KF2B 23/380 P7 S4 B3
10	* PTAJ-02340-Y4V	TRANSFORMER-POWER [E, V, B] A74-234Y-V 74 × 42 230V Y
	* PTAJ-02340-Z4A	TRANSFORMER-POWER [S] A74-234Z-A 74 × 42 240V
	* PTAJ-02340-S4P	TRANSFORMER-POWER [U, Y] A74-234S-974 × 42 120V/230V
11	DDTR-00040-T10	DIODE-RECTIFIER 1N4004 (400V 1A) DO-41 T
12	DDTS-00060-SO0	DIODE-SI 1SS131 (90V 0.13A) DO-40 T
13	TRTA-0042E-SOS	TRANSISTOR P-H FREQ DTA124E-S TO92M
14	TRTC-0061E-SOS	TRANSISTOR N-H FREQ DTC124E-S TO92M
15	* SWVS-00090-S5K	SWITCH-VOLTAGE SEL [U, Y] ESD-26604A 250V 5A

CASSETTE MECHA BLOCK (TN-21ZSW-1262)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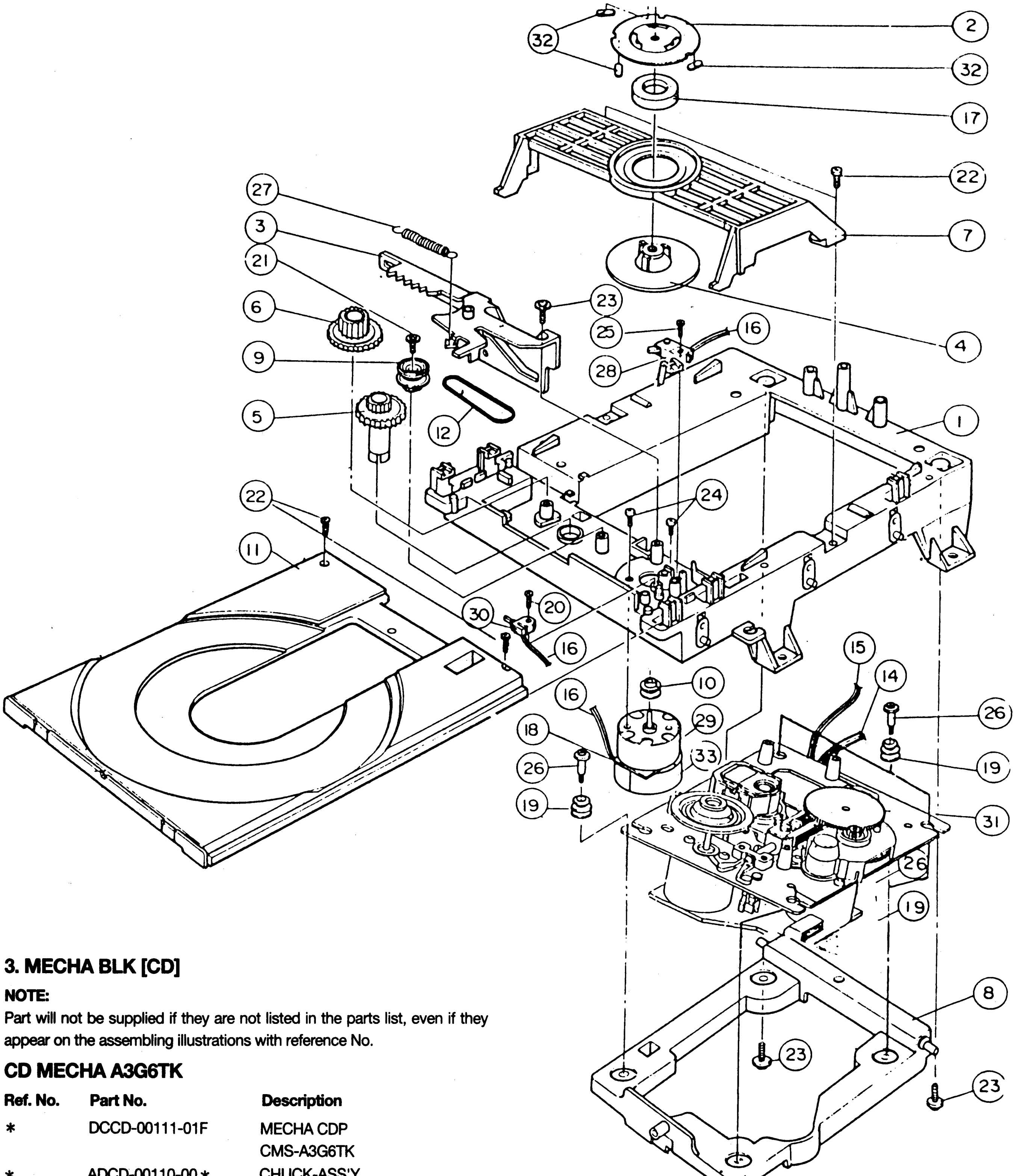
2. MECHA BLOCK (TAPE DECK)

Ref. No.	Part No.	Description
1	ADCA-00186-033	BASE ASS'Y
2	ADCA-00186-002	SWITCH ACTUATOR
3	ADCA-00186-003	PUSH BUTTON ACTUATOR
4	ADCA-00186-004	REC BUTTON LEVER
5	ADCA-00186-005	PLAY BUTTON LEVER
6	ADCA-00186-006	REW BUTTON LEVER
7	ADCA-00186-007	FF BUTTON LEVER
8	ADCA-00186-008	STOP BUTTON LEVER
9	ADCA-00186-009	PAUSE BUTTON LEVER
10	ADCA-00186-010	P CONTROL SPRING
11	ADCA-00186-011	PAUSE LEVER (E)
12	ADCA-00186-012	PAUSE LEVER SPRING
13	ADCA-00186-013	PAUSE STOPPER
14	ADCA-00186-014	BUTTON LEVER SPRING (A)
15	ADCA-00186-015	CHASSIS ASS'Y
16	ADCA-00186-016	E ACTUATOR SPRING
17	ADCA-00186-017	P.S. LEVER SPRING
19	ADCA-00186-018	E KICK LEVER
20	ADCA-00186-019	PR STOPPER
21	ADCA-00186-020	REC BUTTON LEVER SPRING
22	ADCA-00186-021	BUTTON LEVER SPRING (B)
23	ADCA-00186-022	LEAF SWITCH MSW-1541T
25	ADCA-00186-023	HEAD PANEL
26	ADCA-00186-024	HEAD PANEL
27	ADCA-00186-025	HEAD BASE
28	ADCA-00186-026	HEAD BASE
29	ADCA-00186-027	PANEL P SPRING
30	ADCA-00186-028	M CONTROL SPRING
31	ADCA-00186-029	REC ARM
32	ADCA-00186-030	P ARM COLLAR
33	ADCA-00186-031	EH SPRING
34	ADCA-00186-032	AZIMUTH SPRING
35	ADCA-00186-033	PINCH ROLLER ARM ASS'Y
38	ADCA-00186-034	SENSING LEVER
39	ADCA-00186-035	RF CLUTCH ASS'Y
40	ADCA-00186-036	RF BELT
43	ADCA-00186-037	FLYWHEEL ASS'Y
44	ADCA-00186-038	FLYWHEEL ASS'Y
45	ADCA-00186-039	GEAR PLATE SPRING
46	ADCA-00186-040	GEAR PLATE ASS'Y
47	ADCA-00186-041	CAM GEAR
49	ADCA-00186-042	FF GEAR
50	ADCA-00186-043	BACK TENSION SPRING
51	ADCA-00186-044	SUPPLY REEL ASS'Y
52	ADCA-00186-045	TAKE UP REEL ASS'Y
53	ADCA-00186-046	SENSOR
55	ADCA-00186-047	MOTOR BRACKET
56	ADCA-00186-048	MOTOR RUBBER
57	ADCA-00186-049	MOTOR COLLER SCREW
58	ADCA-00186-050	MOTOR PULLEY
59	ADCA-00186-051	MAIN BELT
60	ADCA-00186-052	ANTI VIBRATION FELT MAT
62	ADCA-00186-053	EJECT SLIDE LEVER
64	ADCA-00186-054	PACK SPRING
65	ADCA-00186-055	P HEAD SS15R-AA4N1
66	ADCA-00186-056	R.P. HEAD SS15R-AA4N1
67	ADCA-00186-057	E HEAD E-321PL-0201
68	ADCA-00186-058	MOTOR EG-530YD-2B
69	ADCA-00186-059	RECORD SAFETY LEVER
71	ADCA-00186-060	C TAPPING SCREW M2×3
72	ADCA-00186-061	C TAPPING SCREW M2×4
73	ADCA-00186-062	P TAPPING BING . SCREW M2×5
74	ADCA-00186-063	TAPPING SCREW (FOR CAMERA) M2×45
75	ADCA-00186-064	SCREW M2×6
76	ADCA-00186-065	+ − CAP SCREW M2×8
77	ADC[illegible]86-066	+ BIND SCREW M2×3
78	ADCA-00186-067	AZIMUTH SCREW M2×7
79	ADCA-00186-068	C TAPPING SCREW M2×6
83	ADCA-00186-069	P WASHER CUT 1.2×3.8×0.3
84	ADCA-00186-070	P WASHER CUT 1.45×3.8×0.5
85	ADCA-00186-071	P WASHER 2×3.5×0.3
87	ADCA-00186-072	OPERATION LEVER
88	ADCA-00186-073	BUTTON FRAME (S)
89	ADCA-00186-074	BUTTON LEVER SHAFT
90	ADCA-00186-075	S TAPPING SCREW (FOR CAMERA) M2×8(GUIDE)
91	ADCA-00186-076	P KICK LEVER (B)
92	ADCA-00186-077	P KICK LEVER (A)
93	ADCA-00186-078	PK COLLER SCREW (A)
94	ADCA-00186-079	COLLER (B)
95	ADCA-00186-080	P KICK LEVER SPRING
96	ADCA-00186-081	LEAF SWITCH MSW-17820
97	ADCA-00186-082	LEAF SWITCH MSW-1275
98	ADCA-00186-083	LEAF SWITCH MSW-1664
99	ADCA-00186-084	CAP TAPPING SCREW 2×5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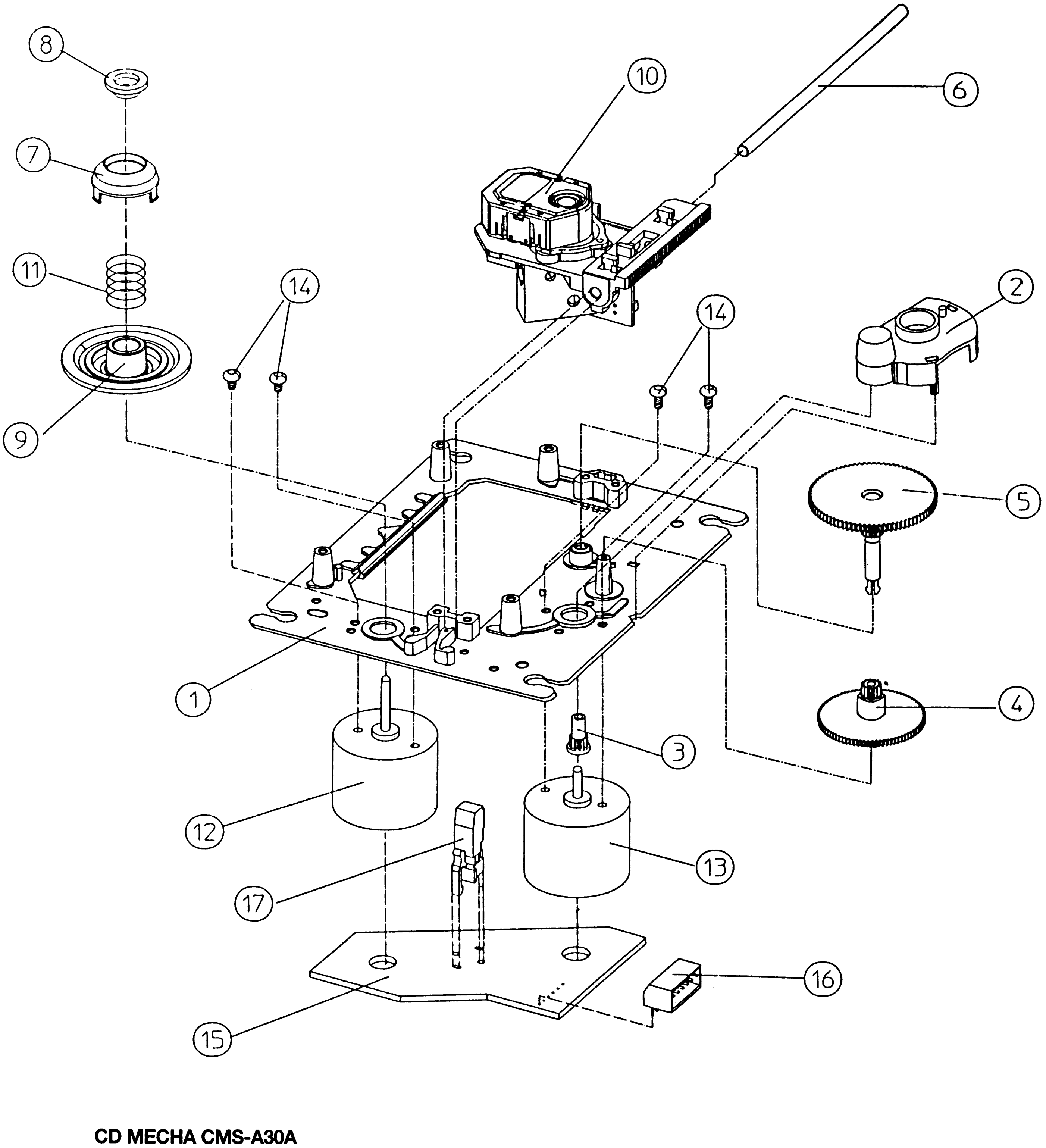
3. MECHA BLK [CD]

NOTE:

Part will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

CD MECHA A3G6TK

Ref. No.	Part No.	Description
*	DCCD-00111-01F	MECHA CDP CMS-A3G6TK
*	ADCD-00110-00 *	CHUCK-ASS'Y NO (2)+(32)+(17)+(7)+(4)
1	ADCD-00110-001	BASE-MAIN ; ABS BLACK
5	ADCD-00110-005	GEAR(A) ; WHT
6	ADCD-00110-006	GEAR(B) ; POM BLK
11	ADCD-00110-011	TRAY ; ABS BLK
12	ADCD-00110-012	BELT
19	ADCD-00110-019	RUBBER-CD SI WHT45
23	ADCD-00110-023	SCREW ; TAP 3 × 8(WASHER) 17154-100-640
26	ADCD-00110-026	SHAFT-CD ; FE FZY
27	ADCD-00110-027	SPRING-CAM STSWP10.2
28	ADCD-00110-028	SWITCH-LEAF ; MLS-1
29	ADCD-00110-029	MOTOR ; RF-500TB-12560
30	ADCD-00110-030	SWITCH-MICRO LSPPB11
31	ADCD-00111-031	DECK-CD ; CMS-A30A



CD MECHA CMS-A30A

Ref. No.	Part No.	Description
1	ADCD-00110-101	CHASSIS-DECK(M)
2	ADCD-00110-102	COVER-GEAR
3	ADCD-00110-103	GEAR(A)
4	ADCD-00110-104	GEAR(B)
5	ADCD-00110-105	GEAR(C)
6	ADCD-00110-106	SHAFT-P/U
7	ADCD-00110-107	CENTER RING
8	ADCD-00110-108	CENTER KNOB
9	ADCD-00110-109	T/TABLE
10	ADCD-00111-110	LASER PICK-UP
11	ADCD-00110-111	SPRING-T/TABLE
12	ADCD-00110-112	MOTOR-SPINDLE
13	ADCD-00110-113	MOTOR-FEED
14	ADCD-00110-114	SCREW-PH
17	ADCD-00110-117	SWITCH-LEAF

4. REMOTE P.C BOARD (A4E-213)

Ref. No.	Part No.	Description
LED1	DPIR-00021-005	DOT-IR LED KLN105B-B
IC1	ICMP-00961-SE0	IC REMOTE CONTROL KS51810-77
X1	KTRE-00060-004	RESONATOR CSB455E 455KHZ
PCB-REMOTE	PCPE-02130-41B	PCB-PRINTED (CARBON) A4E-213 243 × 150 × 1.6t
Q1	TRTC-0016G-SD0	TRANSISTOR N-H FREQ KTC3198-GR TO92

5. ASS'Y-FRONT P.C BOARD (A2U-152A~H)

Ref. No.	Part No.	Description
LD201	DPLT-00452-YC5	DOT-LED AL-151YC YEL R5 N
IC103	ICCM-20360-T90	IC VOLTAGE DETECTOR S80721AN TO-90
IC102	ICHY-00210-SG0	IC REMOTE RECEIV NJH41H380-L UNIT4
IC101	ICMP-01230-SA0	IC UCOMPUTER HD6433813A46F (TCM-9502-05)
P20	KNCH-00450-5BM	CONNECTOR-HOUSING TKC-A05P-C1 2mm 5P MILK
J20	KNCW-00850-5B0	CONNECTOR-WAFER TKC-A05X-B1 2mm 5P BLK
P21	KNCW-00860-NS0	CONNECTOR-WAFER CFF1323-0101 1.25 SIDE BLK
P22	KNCW-00860-VS0	CONNECTOR-WAFER CFF1331-0101 1.25 SIDE BLK
X101	KTAL-00101-003	CRYSTAL KDSIF 32.768KHz-20P
X102	KTRE-00160-060	RESONATOR CST6.00MGW 6.00MHz
PC-FRONT	PCSU-01520-21B	PCB-SINGLE A2U-152 330 × 247 × 1.6t
R151 R152	RMOE-H391J-020	RESISTOR-METAL OXIDE 1W ERG(X)1SJ391E 390ohm T
JK101	SKPH-00350-360	SOCKET-PHONE LGY6501-06
JK102	SKPH-00360-360	SOCKET-PHONE HTJ035-10A
SW101 SW102	SWPU-00301-038	SWITCH-PUSH 00220014 1K(2C2P)
S101 S118	SWTA-00220-060	SWITCH-TACT SKHV10910(A) 12V 50mA
Q218 Q219	TRTA-0009Y-SD0	TRANSISTOR P-H FREQ KTA1271-Y TO92
Q102	TRTC-0016G-SD0	TRANSISTOR N-H FREQ KTC3198-GR TO92
Q220 Q221	TRTC-01060-SD0	TRANSISTOR N-H FREQ KTC3203 TO92
Q223 Q224	TRTD-00200-SD0	TRANSISTOR N-L FREQ KTD-1302 TO92

6. ASS'Y-MAIN P.C BOARD (A1U-309A~D)

Ref. No.	Part No.	Description
CF203	BTCE-00050-004	FILTER-CERAMIC SFU 450B
CF201 CF202	BTCE-00060-107	FILTER-CERAMIC[E, B, V_2, S, A, U, Y] SFE 10.7MS3G-A
	BTCE-00152-107	FILTER-CERAMIC [V_1] SFE 10.7MJA10H-A
CF204	BTCE-00311-004	FILTER-CERAMIC CSB456F18
C222	CFST-O221J-CJ0	CAPACITOR F/STYROL 220PF J 125V 5.5 × 12 T
C402 C404	CFST-O331J-CJ0	CAPACITOR F/STYROL 330PF J 125V 5.5 × 12 T
C219 C455 C456	CFST-O471J-CJ0	CAPACITOR F/STYROL 470PF J 125V 5.5 × 12 T
C372 C373	CFST-O911J-CJ0	CAPACITOR F/STYROL 910PF J 125V 5.5 × 12 T
D207 D208 D209 D210	DDSV-0003B-S30	DIODE-VVC 1SV149B AM 8V DIP2 S
D211	DDTZ-G051B-SO0	DIODE ZENER MTZ5.1B 4.94-5.2 DO40 T
D301 D302	DDTZ-G082C-SO0	DIODE ZENER MTZ8.2C 8.03-8.45 DO40 T
D217	DDTZ-G091B-SO0	DIODE ZENER MTZ9.1B 9.01 DO40 T
LP101 LP102 LP103	DPLA-00160-00B	LAMP SL422-012110PP 110mA 12V
LCD101	DPLC-00270-00Z	DISPLAY-LCD OEL-7613-506R022A
IC406	ICCM-00020-SQ0	IC QUAD NAND GATE GD4011B DIP14
IC303	ICCM-00170-SQ0	IC 4CH MUX/DEMUX GD4052B DIP16
IC202	ICCM-20380-S10	IC PLL LC7218 DIP24S
IC306	ICCM-20390-SG0	IC ELECTRONIC VOLUME NJU7305 SDIP28
IC405	ICDG-00370-S20	IC TAPE SELECTOR μPC1330HA SIP9
IC401	ICLN-00540-SO0	IC 2CH PRE AMP BA3416BL DIP16
IC402	ICLN-00681-SA0	IC DOLBY B HA12136A DIP16
IC304 IC305	ICLN-01550-S50	IC 7BAND EQ AN7337N DIP20
IC201	ICLN-01640-S10	IC AM/FM IF MPX LA1851N DIP30
IC302 IC312 IC404	ICOP-00131-SE0	IC DUAL OP AMP KA4558C DIP8
IC403	ICRG-00240-SE0	IC REGULATOR MC78L05 5V TO-92
T206	IFFD-00140-E60	IFT-FM DET AFD014 7.4mm-CAN
T205	KIAA-00140-ED0	COIL-AM IFT AAA-014B
T203	KIAO-00240-E20	COIL-AM OSC AAO024 MW 7mm-CAN
T204	KIAO-00250-E20	COIL-AM OSC [E, V, B] AAO025 LW 7mm-CAN
	KIAO-00260-E20	COIL-AM OSC [U, Y] AAO026 7mm-CAN

Ref. No.	Part No.	Description
T202	KIAT-00301-E20	COIL-AM ANT [E, V, B]
		AAT030-1 LW 10mm-CAN
	KIAT-00370-E20	COIL-AM ANT [U, Y]
		AAT037 SW 10mm-CAN
T201	KIAT-00351-E20	COIL-AM ANT
		AAT035-1 MW 10mm-CAN
T207	KIML-A0020-E20	COIL-FM MPX FILTER
		AFL-002 114KHz 7mm-CAN
T208	KIML-A0010-E60	COIL-FM MPX FILTER
T209		AMA-001A 19KHz 10mm-CAN
L402	KIRK-00200-E50	COIL-REC CHOCK
L404		ARK-020 3.9mH MOLD SHIELD
L401	KIRK-00210-E50	COIL-REC CHOCK
L403		ARK-021 8.2mH MOLD SHIELD
T403	KIRO-00140-E60	COIL-REC OSC
		ARO014 85KHz 10mm-CAN
T401	KIRP-00050-E60	COIL-REC TRAP
T402		ARP005A 100KHz 7mm-C
T404		
T405		
X201	KTAL-00041-072	CRYSTAL
		HC-49/U 7.200000MHz
PCB-MAIN	PCSU-03090-11B	PCB-SINGLE
		A1U-309 330×247×1.6t
JK301	SKRC-00290-020	SOCKET-RCA
		JK0200440N 2P
Q226	TRTK-0001G-S30	FET N-CHANNEL
		2SK246-GR TO92
Q206	TRTA-0008G-SD0	TRANSISTOR P-H FREQ
Q207		KTA1266-GR TO92
Q208		
Q455		
Q456		
Q430	TRTC-0008Y-SD0	TRANSISTOR N-H FREQ
		KTC2120-Y TO92
Q201	TRTC-0010Y-SD0	TRANSISTOR N-H FREQ
		KTC1923-Y TO92
Q204	TRTC-0016G-SD0	TRANSISTOR N-H FREQ
Q205		KTC3198-GR TO92
Q225		
Q216	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ
Q429		KTC3205-Y TO92L
Q202	TRTC-0094Y-SD0	TRANSISTOR N-H FREQ
Q203		KTC3199-Y TO92M
Q401		
Q402		
Q403		
Q404		
Q419		
Q420		
Q421		
Q422		
Q423		
Q424		
Q425		
Q451		
Q452		
Q209	TRTD-00200-SD0	TRANSISTOR N-L FREQ
Q210		KTD-1302 TO92
Q213		
Q417		
Q418		
Q432		
Q433		
FE201	TUFF-00150-001	FRONT-END
		FE340-A01 12V
SV401	VFEB-A001B-103	RESISTOR-SEMI FIXED
SV402		EVN DXA A03 B14 10Kohm
SV407	VFEB-A001B-104	RESISTOR-SEMI FIXED
SV408		EVN DXA A03 B15 100Kohm
SV202	VFEB-A001B-223	RESISTOR-SEMI FIXED
SV405		EVN DXA A03 BE4 22Kohm
SV406		
SV201	VFEB-A001B-472	RESISTOR-SEMI FIXED
SV203		EVN DXA A03 BQ3 4.7Kohm

7. ASS'Y-AMP P.C BOARD (A2U-151A~C)

Ref. No.	Part No.	Description
L903	* BTAL-00010-025	FILTER-AC LINE
		FKOB160MH02 2A
D907	DDTZ-G130B-SO0	DIODE ZENER
		MTZ13B 12.55-13.21 DO40 T
D911	DD4B-00240-T10	DIODE-BRIDGE
		BL4-06 250V 3A BRIDGE
IC901	ICHP-00090-S10	IC HYBRID AMP-POWER
		STK4132 Ⅱ 20W×2 SIP18
IC908	ICRG-00043-SE0	IC REGULATOR
		KA7805 5V 3mm TO-220
IC906	ICRG-00218-SE0	IC REGULATOR
		KA7812 12V 3mm TO-220
IC907	ICRG-00240-SE0	IC REGULATOR
		MC78L05 5V TO-92
IC902	ICRG-00310-SD0	IC REGULATOR
IC904		KIA78L12 TO-92
IC905	ICRG-00330-SG0	IC REGULATOR
		NJM7909FA −9V 2.2A TO-220
IC903	ICRG-00440-SG0	IC REGULATOR
		NJM7912FA TO-220
L901	KIBK-00050-E40	COIL-AUDIO CHOCK
L902		ABK005 2.2μH
PCB-AMP	PCSU-01510-25B	PCB-SINGLE
		A2U-151 330×197×1.6t
R918	RCMS-JR22K-410	RESISTOR-CEMENT
R927		0.22ohm 2W 10% S
FR902	* RFUE-F470J-010	RESISTOR-FUSIBLE
		47ohm 1/4W ERQ14AJ470E T
FR901	* RFUE-F560J-010	RESISTOR-FUSIBLE
		56ohm 1/4W ERQ14AJ560E T
FR903	* RFUM-F1R0J-120	RESISTOR-FUSIBLE
FR904		1.0ohm 1/4W 5% M
FR905		
FR907	* RFUM-G1R0J-130	RESISTOR-FUSIBLE
FR908		1ohm 1/2W 5% M
FR906	* RFUZ-A2R2K-001	RESISTOR-FUSIBLE
		2.2ohm 1/6W K ERQ16NK2R2E
Q917	TRSA-0023Y-SD0	TRANSISTOR P-H FREQ
		KTA1658-Y TO220IS
Q911	TRSD-0008Y-SD0	TRANSISTOR N-L FREQ
Q920		KTD2058-Y TO220AB
Q903	TRTA-0008G-SD0	TRANSISTOR P-H FREQ
Q904		KTA1266-GR TO92
Q912		
Q916		

Ref. No.	Part No.	Description
Q922 Q919	TRTA-0009Y-SD0	TRANSISTOR P-H FREQ KTA1271-Y TO92
Q907	TRTA-0056T-SOS	TRANSISTOR P-H FREQ DTA114T-S W/RESIST TO92M
Q906	TRTC-0034Y-SOS	TRANSISTOR N-H FREQ DTC114Y-S TO92
Q923	TRTC-0060E-SOS	TRANSISTOR N-H FREQ DTC144E-S TO92M
Q905	TRTD-00200-SD0	TRANSISTOR N-L FREQ KTD-1302 TO92
SV902	VFEB-A001B-102	RESISTOR-SEMI FIXED EVN DXA A03 B13 1Kohm
SV901	VFEB-A001B-222	RESISTOR-SEMI FIXED EVN DXA A03 BE3 2.2Kohm

8. ASS'Y-CD P.C BOARD (A2U-154)

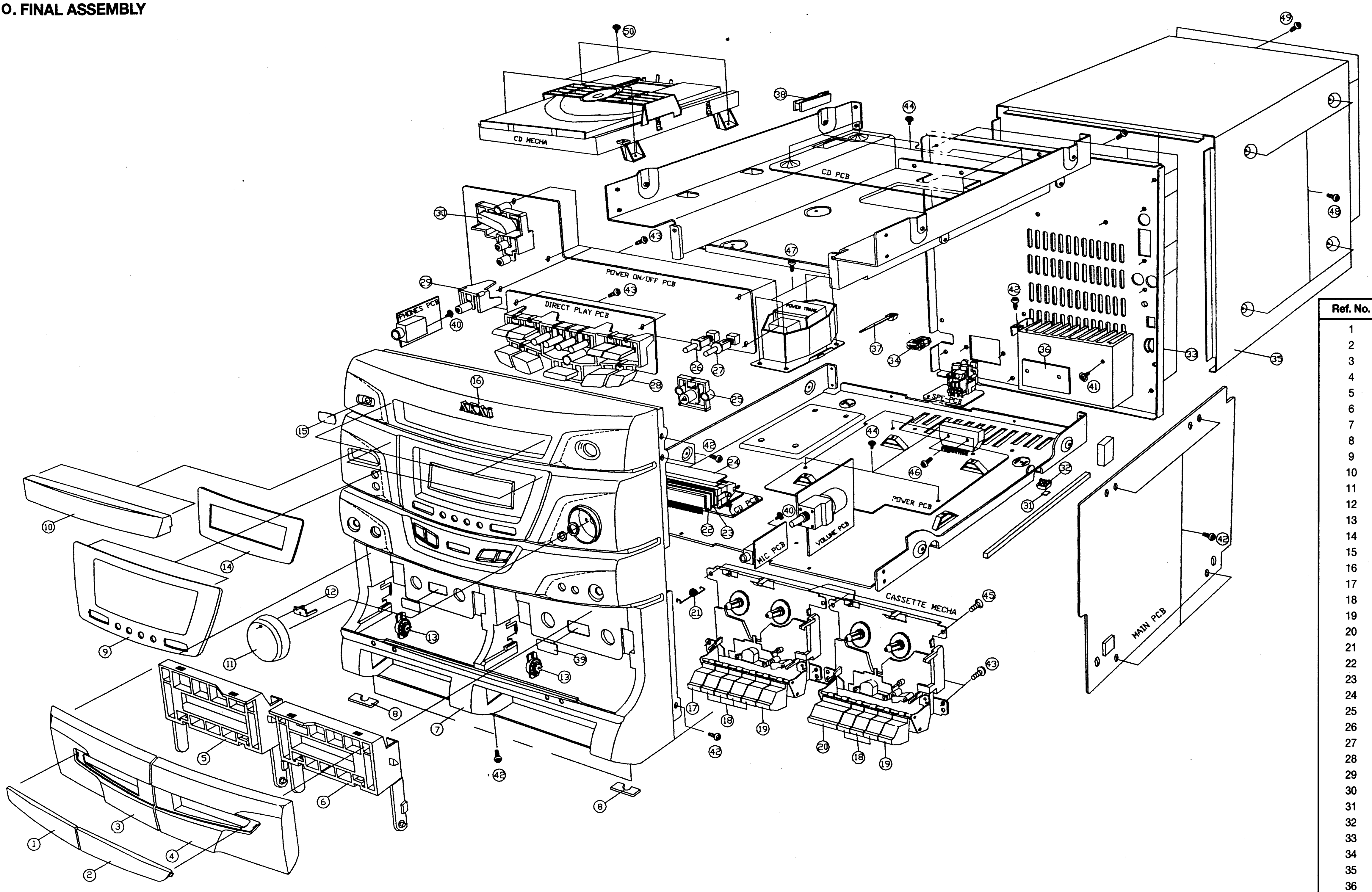
Ref. No.	Part No.	Description
D602	DDTZ-G056B-SO0	DIODE ZENER MTZ5.6B 5.45-5.73 DO40 T
D607	DDTZ-G062B-SO0	DIODE ZENER MTZ6.2B 5.96-6.27 DO40 T
IC606	ICDG-00340-SO0	IC MOTOR DRIVER BA6209 DIP10H
IC602	ICDG-00940-SE0	IC D.S.P+D.A.C (CDP) KS-9282B QFP80
IC601	ICDG-00950-SE0	IC RF+SERVO (CDP) KA-9220B QFP80
IC603	ICLN-01590-SE0	IC MOTOR CONTROL CDP KA-9258D HSOP28
IC604 IC605	ICOP-00130-SE0	IC DUAL OP AMP KA4558S SIP9
PCB-CDP	PCSU-01540-21B	PCB-SINGLE A2U-154 247 × 247 × 1.6t
Q602 Q614	TRSA-0023Y-SD0	TRANSISTOR P-H FREQ KTA1658-Y TO220IS
Q601 Q604	TRTA-0008G-SD0	TRANSISTOR P-H FREQ KTA1266-GR TO92
Q606 Q610	TRTA-0042E-SOS	TRANSISTOR P-H FREQ DTA124E-S TO92M
Q603	TRTC-0016G-SD0	TRANSISTOR N-H FREQ KTC3198-GR TO92
Q608 Q609	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ KTC3198-Y TO92
Q605 Q607 Q611 Q615	TRTC-0034Y-SOS	TRANSISTOR N-H FREQ DTC114Y-S TO92
Q612 Q613	TRTD-00200-SD0	TRANSISTOR N-L FREQ KTD-1302 TO92
SV601 SV602 SV603 SV604	VFEB-A001B-223	RESISTOR-SEMI FIXED EVN DXA A03 BE4 22Kohm

9. ASS'Y-VTG SELECTOR P.C BOARD (A4G-221)

Ref. No.	Part No.	Description
PCB-VTG	PCSG-02210-45B	PCB-SINGLE A4G-221

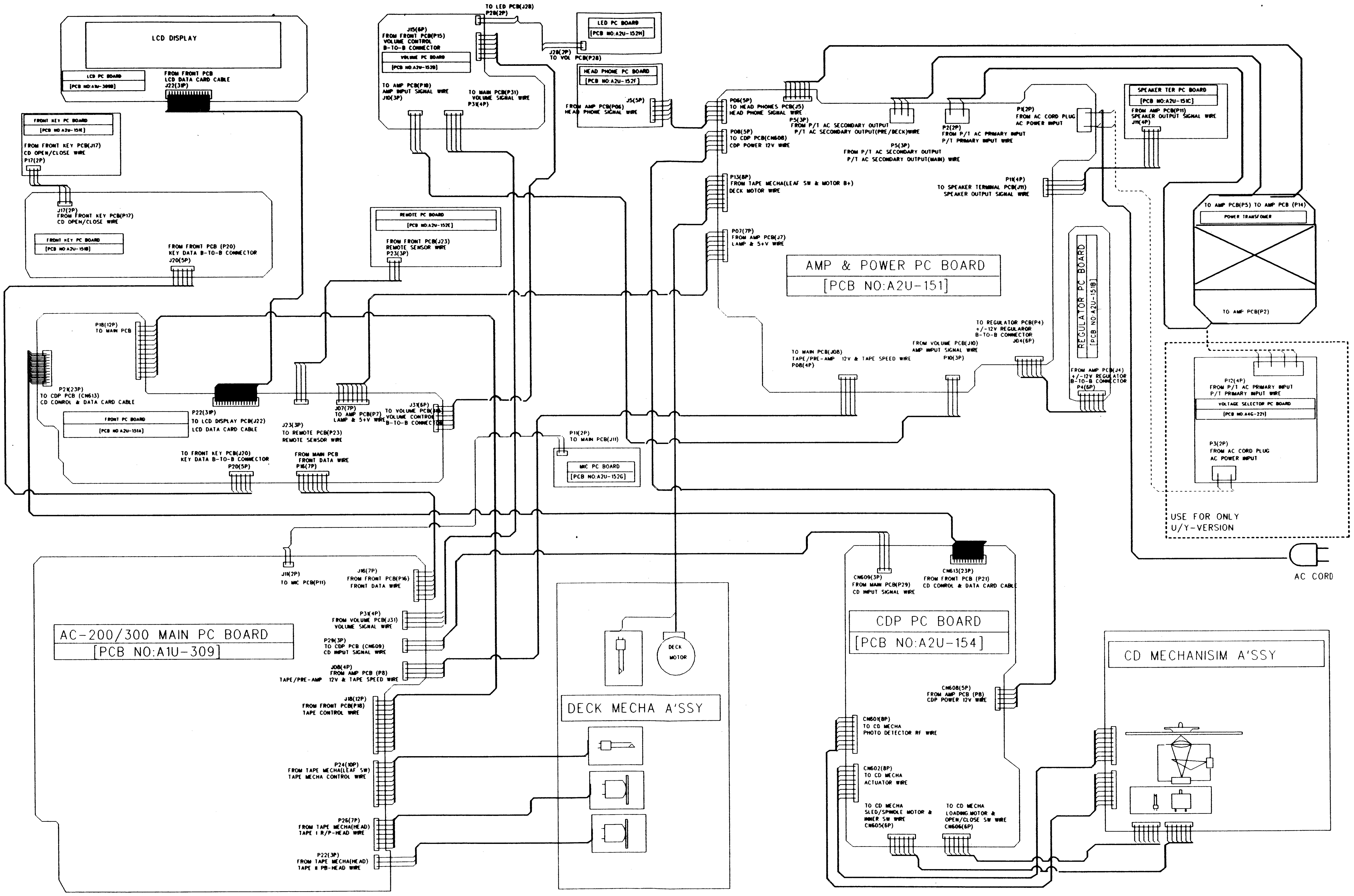
EXPLODED VIEW

10. FINAL ASSEMBLY

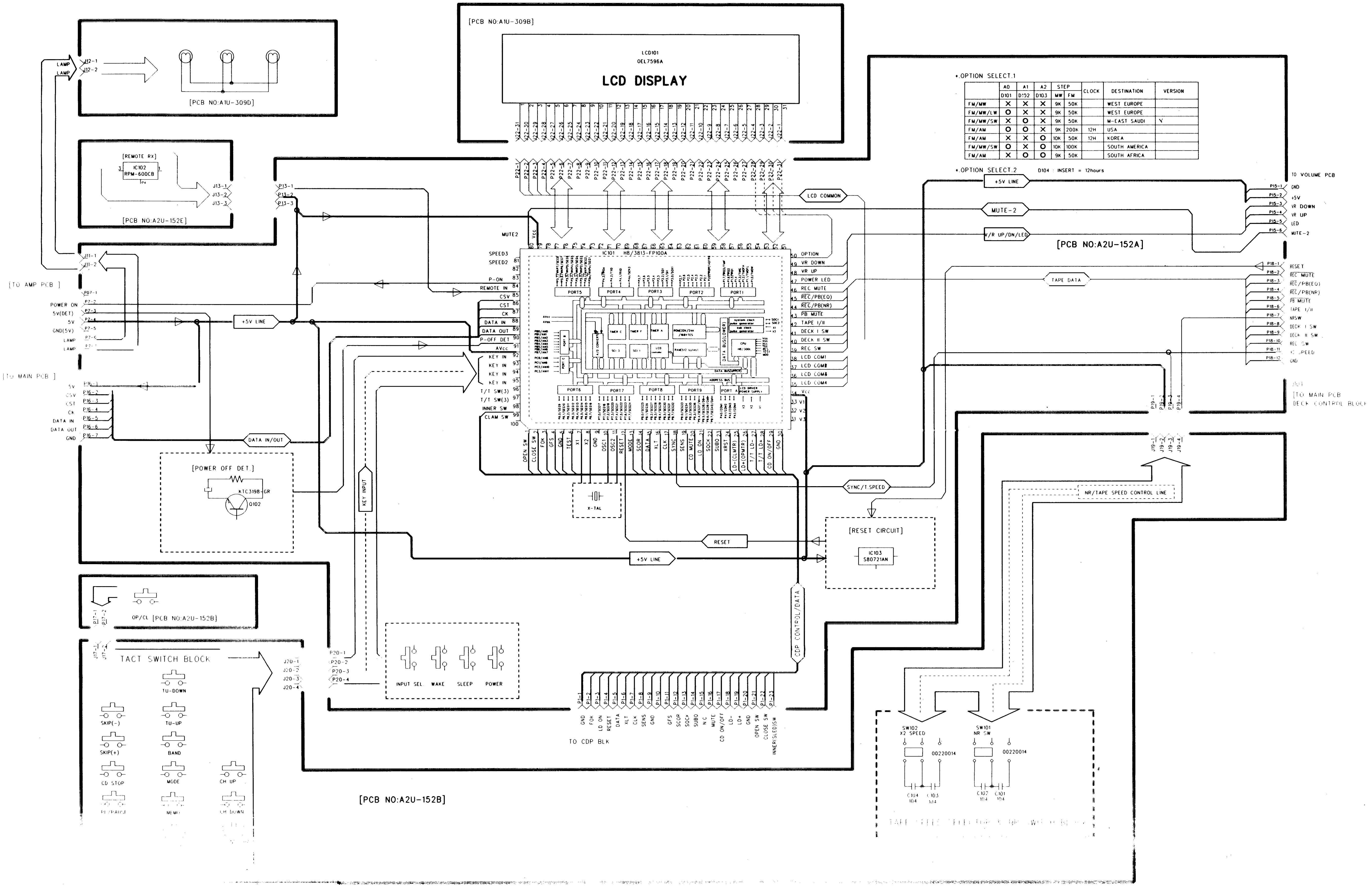


Ref. No.	Part No.	Description
1	MJAF-05370-ZZ3	WINDOW-DOOR-L
2	MJAF-05380-ZZ3	WINDOW-DOOR-R
3	MJAF-02400-ZZ2	CAP-DOOR-L
4	MJAF-02410-ZZ2	CAP-DOOR-R
5	MJAF-002420-002	FRAME-DOOR-L
6	MJAF-002421-002	FRAME-DOOR-R
7	MJAF-03630-ZZ1	PANEL-FRONT
8	MRAG-10810-004	CUSHION-FOOT
9	MJAF-05230-ZZ3	WINDOW-LCD
10	MJAF-05250-ZZ3	DOOR-CDP
11	MJAF-12230-ZZ4	KNOB-VOLUME
12	MJAF-12260-ZZ4	LENS-VOLUME
13	MJAG- 08110-004	DAMPER-GEAR
14	MAAF-12390-ZZ4	PLATE-LCD
15	MAAF-12350-ZZA	PLATE-REMOTE
16	MJAF-12580-ZZ4	BADGE-AKAI
17	MJAF-12180-ZZ4	KNOB-DECK-REC
18	MJAF-12200-ZZ4	KNOB-DECK-REW
19	MJAF-12170-ZZ4	KNOB-DECK-PAUSE
20	MJAF-12190-ZZ4	KNOB-DECK-PLAY(A)
21	MMAC-13360-004	SPRING-DECK-DOOR
22	MAAF-12670-ZZ4	FILTER-LCD-F
23	MAAF-12360-ZZ4	FILTER-LCD
24	MJAG-00290-002	GUIDE-LCD
25	MJAF-12220-ZZ4	KNOB-OP/CL
26	MJAF-12240-ZZ4	KNOB-DOLBY
27	MJAF-12250-ZZ4	KNOB-DUBBING
28	MJAF-05240-ZZ3	KNOB-FUNCTION
29	MJAF-12210-ZZ4	KNOB-CHARACTOR
30	MJAF-05260-ZZ3	KNOB-POWER
31	MRAG-10150-004	CUSHION-FOOT-B
32	MJAG-10140-004	FOOT-B
33	MPAC-03430-ZZ2	CHASSIS-BACK
34	MJAG-00281-003	BUSH-CORD
35	MPAC-03690-ZZ1	CHASSIS-TOP
36	MRAG-07450-004	RUBBER-IC-L
37	MJAG-04540-004	CABLE-TIE-L80
38	MJAG-09730-004	FLAT-CLAMP
39	MGAF-04940-ZZ4	REFLECTOR-TAPE
40	MMTC-00752-004	SCREW-TAPPING
41	MMTC-12182-004	SCREW-TAPPING
42	XSTB-30080-ZY4	SCREW-TAPPING
43	XSTB-30100-ZY4	SCREW-TAPPING
44	XSTW-30080-ZY4	SCREW-TAPPING
45	XSTF-30100-ZY4	SCREW-TAPPING
46	XSTB-30120-ZY4	SCREW-TAPPING
47	XSTB-40080-ZY8	SCREW-TAPPING
48	XSTB-40080-ZB8	SCREW-TAPPING
49	XSTB-30100-ZB4	SCREW-TAPPING
50	XSTS-30060-ZY8	SCREW-TAPPING

VI. WIRING DIAGRAM


LCD DISPLAY
LCD PC BOARD
[PCB NO:A1U-309B]
FROM FRONT PCB
LCD DATA CARD CABLE
J22(31P)
FRONT KEY PC BOARD
[PCB NO A2U-151E]
FROM FRONT KEY PCB(J17)
CD OPEN/CLOSE WIRE
P17(2P)
J17(2P)
FROM FRONT KEY PCB(P17)
CD OPEN/CLOSE WIRE
FRONT KEY PC BOARD
[PCB NO:A2U-151B]
FROM FRONT PCB (P20)
KEY DATA B-TO-B CONNECTOR
J20(5P)
TO LED PCB(J28)
P28(2P)
J15(6P)
FROM FRONT PCB(P15)
VOLUME CONTROL
B-TO-B CONNECTOR
VOLUME PC BOARD
[PCB NO:A2U-152B]
TO AMP PCB(P10)
AMP INPUT SIGNAL WIRE
J10(3P)
TO MAIN PCB(P31)
VOLUME SIGNAL WIRE
P31(4P)
LED PC BOARD
[PCB NO:A2U-152H]
J28(2P)
TO VOL PCB(P28)
HEAD PHONE PC BOARD
[PCB NO:A2U-152F]
J5(5P)
FROM AMP PCB(P06)
HEAD PHONE SIGNAL WIRE
REMOTE PC BOARD
[PCB NO:A2U-152E]
FROM FRONT PCB(J23)
REMOTE SENSOR WIRE
P23(3P)
P06(5P)
TO HEAD PHONES PCB(J5)
HEAD PHONE SIGNAL WIRE
P5(3P)
FROM P/T AC SECONDARY OUTPUT
P/T AC SECONDARY OUTPUT(PRE/DECK)WIRE
P08(5P)
TO CDP PCB(CN608)
CDP POWER 12V WIRE
P5(3P)
FROM P/T AC SECONDARY OUTPUT
P/T AC SECONDARY OUTPUT(MAIN) WIRE
P2(2P)
FROM P/T AC PRIMARY INPUT
P/T PRIMARY INPUT WIRE
P1(2P)
FROM AC CORD PLUG
AC POWER INPUT
SPEAKER TER PC BOARD
[PCB NO:A2U-151C]
FROM AMP PCB(P11)
SPEAKER OUTPUT SIGNAL WIRE
J11(4P)
P13(8P)
FROM TAPE MECHA(LEAF SW & MOTOR B+)
DECK MOTOR WIRE
P11(4P)
TO SPEAKER TERMINAL PCB(J11)
SPEAKER OUTPUT SIGNAL WIRE
TO AMP PCB(P5) TO AMP PCB (P14)
POWER TRANSFOMER
TO AMP PCB(P2)
P07(7P)
FROM AMP PCB(J7)
LAMP & 5+V WIRE
AMP & POWER PC BOARD
[PCB NO:A2U-151]
REGULATOR PC BOARD
[PCB NO:A2U-151B]
TO REGULATOR PCB(P4)
+/-12V REGULAROR
B-TO-B CONNECTOR
J04(6P)
FROM VOLUME PCB(J10)
AMP INPUT SIGNAL WIRE
P10(3P)
TO MAIN PCB(J08)
TAPE/PRE-AMP 12V & TAPE SPEED WIRE
P08(4P)
FROM AMP PCB(J4)
+/-12V REGULATOR
B-TO-B CONNECTOR
P4(6P)
P12(4P)
FROM P/T AC PRIMARY INPUT
P/T PRIMARY INPUT WIRE
VOLTAGE SELECTOR PC BOARD
[PCB NO.A4G-221]
P3(2P)
FROM AC CORD PLUG
AC POWER INPUT
USE FOR ONLY
U/Y-VERSION
AC CORD
P18(12P)
TO MAIN PCB
P21(23P)
TO CDP PCB (CN613)
CD CONROL & DATA CARD CABLE
FRONT PC BOARD
[PCB NO A2U-151A]
P22(31P)
TO LCD DISPLAY PCB(J22)
LCD DATA CARD CABLE
J23(3P)
TO REMOTE PCB(P23)
REMOTE SENSOR WIRE
J07(7P)
TO AMP PCB(P7)
LAMP & 5+V WIRE
J31(6P)
TO VOLUME PCB(J15)
VOLUME CONTROL
B-TO-B CONNECTOR
TO FRONT KEY PCB(J20)
KEY DATA B-TO-B CONNECTOR
P20(5P)
FROM MAIN PCB
FRONT DATA WIRE
P16(7P)
P11(2P)
TO MAIN PCB(J11)
MIC PC BOARD
[PCB NO:A2U-152G]
J11(2P)
TO MIC PCB(P11)
J16(7P)
FROM FRONT PCB(P16)
FRONT DATA WIRE
AC-200/300 MAIN PC BOARD
[PCB NO:A1U-309]
P31(4P)
FROM VOLUME PCB(J31)
VOLUME SIGNAL WIRE
P29(3P)
TO CDP PCB (CN609)
CD INPUT SIGNAL WIRE
J08(4P)
FROM AMP PCB (P8)
TAPE/PRE-AMP 12V & TAPE SPEED WIRE
J18(12P)
FROM FRONT PCB(P18)
TAPE CONTROL WIRE
P24(10P)
FROM TAPE MECHA(LEAF SW)
TAPE MECHA CONTROL WIRE
P26(7P)
FROM TAPE MECHA(HEAD)
TAPE I R/P-HEAD WIRE
P22(3P)
FROM TAPE MECHA(HEAD)
TAPE II PB-HEAD WIRE
DECK MOTOR
DECK MECHA A'SSY
CN609(3P)
FROM MAIN PCB(P29)
CD INPUT SIGNAL WIRE
CN613(23P)
FROM FRONT PCB (P21)
CD CONROL & DATA CARD CABLE
CDP PC BOARD
[PCB NO:A2U-154]
CN608(5P)
FROM AMP PCB (P8)
CDP POWER 12V WIRE
CN601(8P)
TO CD MECHA
PHOTO DETECTOR RF WIRE
CN602(8P)
TO CD MECHA
ACTUATOR WIRE
TO CD MECHA
SLED/SPINDLE MOTOR &
INNER SW WIRE
CN605(6P)
TO CD MECHA
LOADING MOTOR &
OPEN/CLOSE SW WIRE
CN606(6P)
CD MECHANISIM A'SSY

VII. BLOCK DIAGRAM/FRONT

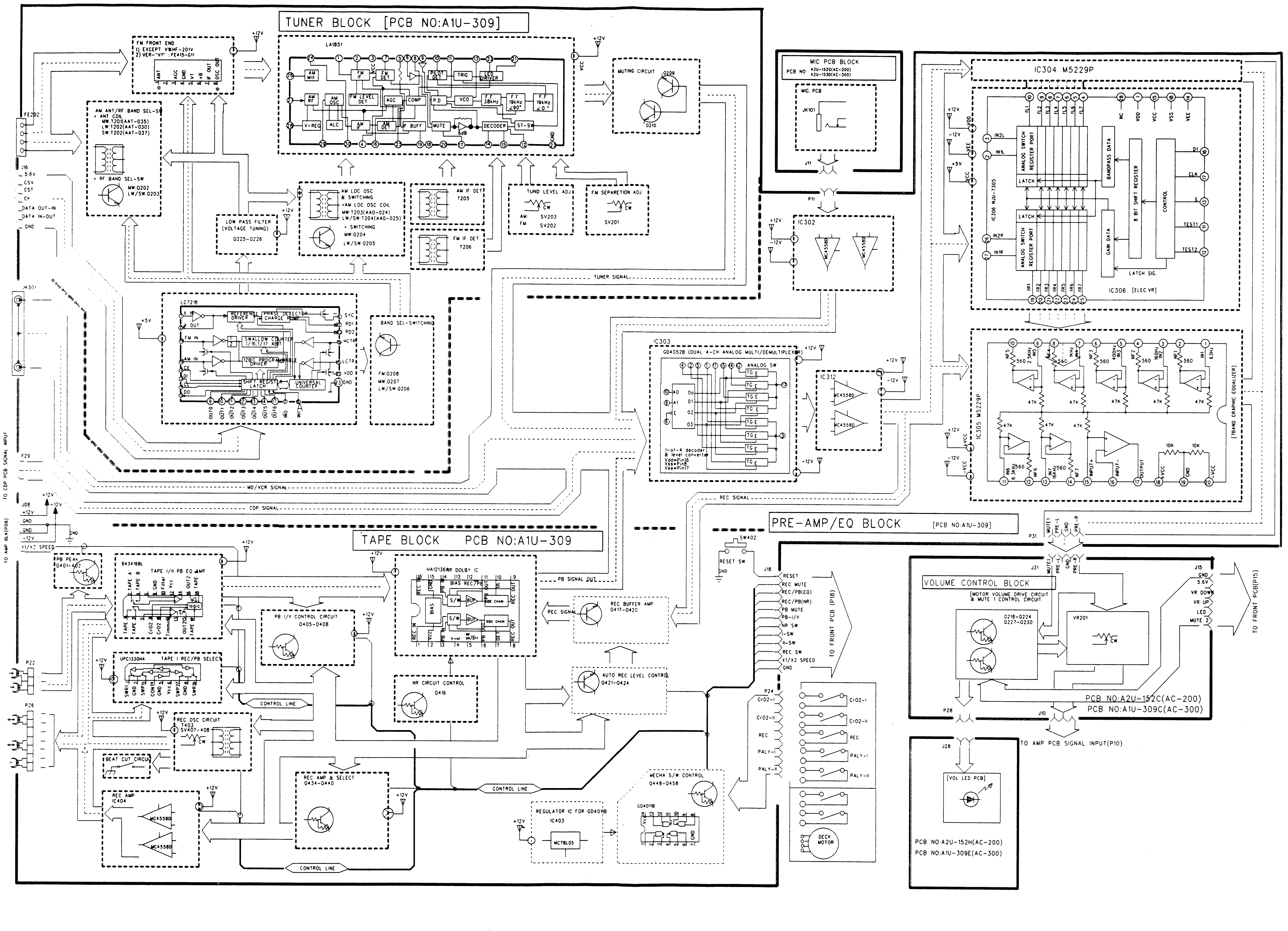

[PCB NO:A1U-309B]
LCD101
OEL7596A
LCD DISPLAY
[PCB NO:A1U-309D]
LAMP
J12-1
J12-2
[REMOTE RX]
IC102
RPM-600CB
J13-1
J13-2
J13-3
[PCB NO:A2U-152E]
P13-1
P13-2
P13-3
J11-1
J11-2
[TO AMP PCB]
POWER ON
5V(DET)
5V
GND(5V)
LAMP
[TO MAIN PCB]
5V
CSV
CST
CK
DATA IN
DATA OUT
GND
+5V LINE
DATA IN/OUT
[POWER OFF DET]
KTC3198-GR
Q102
KEY INPUT
MUTE2
SPEED3
SPEED2
P-ON
REMOTE IN
CSV
CST
CK
DATA IN
DATA OUT
P-OFF DET
AVcc
KEY IN
T/T SW(3)
INNER SW
CLAM SW
IC101 : H8/3813-FP100A
PORT1
PORT2
PORT3
PORT4
PORT5
PORT6
PORT7
PORT8
PORT9
OPTION
VR DOWN
VR UP
POWER LED
REC MUTE
REC/PB(EQ)
REC/PB(NR)
PB MUTE
TAPE I/II
DECK I SW
DECK II SW
REC SW
LCD COM1
LCD COM2
LCD COM3
LCD COM4
Vcc
V1
V2
V3
OPEN SW
CLOSE SW
FOK
GFS
TEST
X1
X2
GND
OSC1
OSC2
RESET
MODE
SQDR
DATA
XLT
CLK
SYNC
SENS
CD MUTE
LD ON
SQCK
SUBQ
XRST
LD-(CLMTR)
LD+(OPMTR)
T/T LD+
CD ON/OFF
GND
X-TAL
LCD COMMON
+5V LINE
MUTE-2
V/R UP/DN/LED
[PCB NO:A2U-152A]
TO VOLUME PCB
P15-1 GND
P15-2 +5V
P15-3 VR DOWN
P15-4 VR UP
P15-5 LED
P15-6 MUTE-2
TAPE DATA
P18-1 RESET
P18-2 REC MUTE
P18-3 REC/PB(EQ)
P18-4 REC/PB(NR)
P18-5 PB MUTE
P18-6 TAPE I/II
P18-7 NRSW
P18-8 DECK I SW
P18-9 DECK II SW
P18-10 REC SW
P18-11 SPEED
P18-12 GND
[TO MAIN PCB DECK CONTROL BLOCK]
P19-1
P19-2
P19-3
P19-4
J19-1
J19-2
J19-3
J19-4
SYNC/T.SPEED
NR/TAPE SPEED CONTROL LINE
RESET
+5V LINE
[RESET CIRCUIT]
IC103
S80721AN
CDP CONTROL/DATA
OP/CL [PCB NO:A2U-152B]
P17-1
P17-2
J17-1
J17-2
TACT SWITCH BLOCK
TU-DOWN
TU-UP
BAND
MODE
MEMO
SKIP(-)
SKIP(+)
CD STOP
PL/PAUSE
CH UP
CH DOWN
J20-1
J20-2
J20-3
J20-4
P20-1
P20-2
P20-3
P20-4
INPUT SEL
WAKE
SLEEP
POWER
P1-1 GND
P1-2 FOK
P1-3 LD ON
P1-4 RESET
P1-5 DATA
P1-6 XLT
P1-7 CLK
P1-8 SENS
P1-9 GND
P1-10 GFS
P1-11 SQCK
P1-12 SQCK
P1-13 SUBQ
P1-14 N/C
P1-15 MUTE
P1-16 LD-
P1-17 CD ON/OFF
P1-18 LD+
P1-19 GND
P1-20 OPEN SW
P1-21 CLOSE SW
P1-22 INNER/SLED/SW
TO CDP BLK
[PCB NO:A2U-152B]
SW102
X2 SPEED
SW101
NR SW
00220014
C104
C103
C102
C101
TAPE SPEED SELECTOR SWITCH BLOCK

*.OPTION SELECT.1

	A0	A1	A2	STEP		CLOCK	DESTINATION	VERSION
	D101	D102	D103	MW	FM			
FM/MW	X	X	X	9K	50K		WEST EUROPE	
FM/MW/LW	O	X	X	9K	50K		WEST EUROPE	
FM/MW/SW	X	O	X	9K	50K		M-EAST SAUDI	Y
FM/AM	O	O	X	9K	200K	12H	USA	
FM/AM	X	X	O	10K	50K	12H	KOREA	
FM/MW/SW	O	X	O	10K	100K		SOUTH AMERICA	
FM/AM	X	O	O	9K	50K		SOUTH AFRICA	

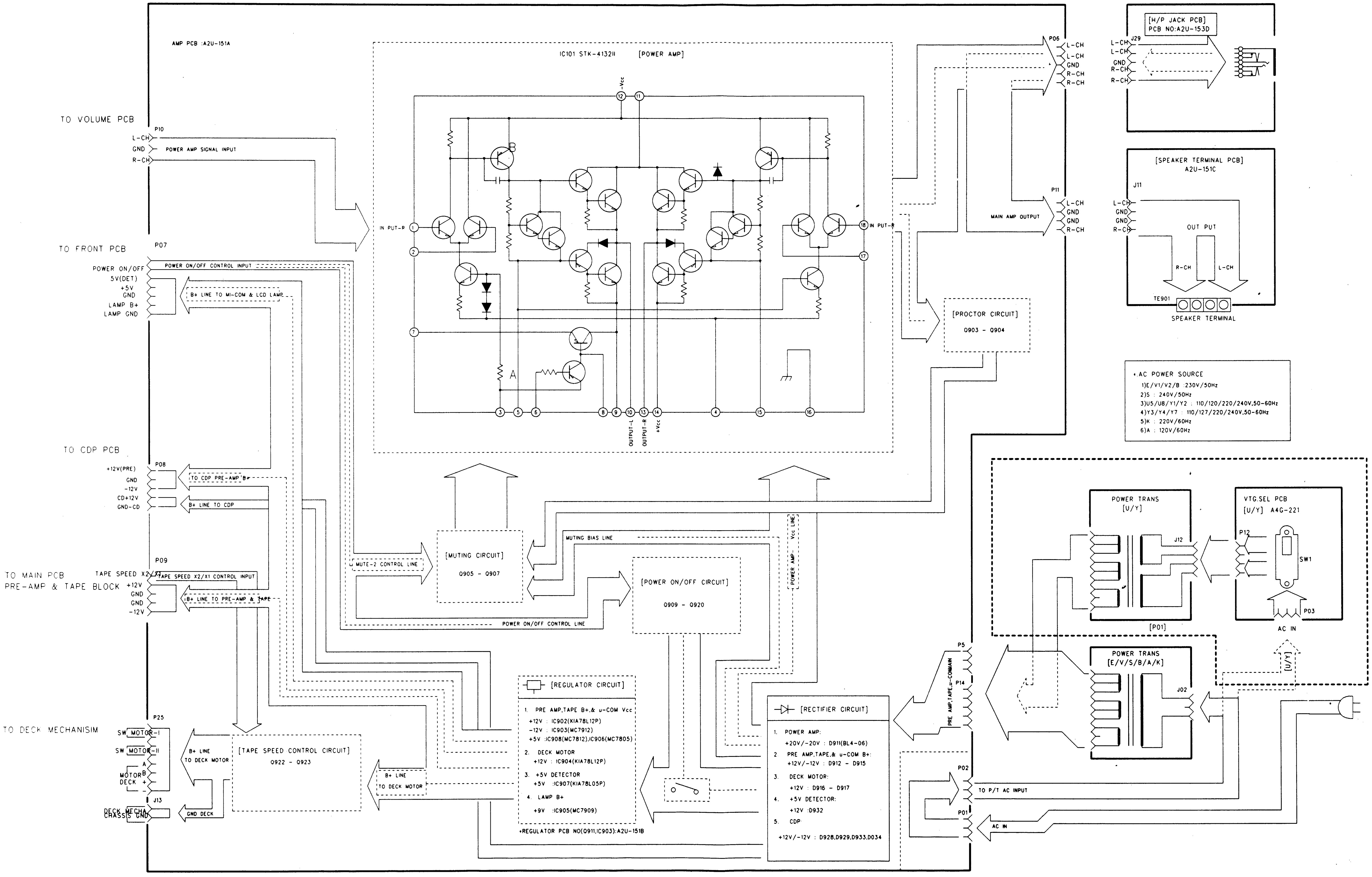
*.OPTION SELECT.2 D104 : INSERT = 12hours

BLOCK DIAGRAM/MAIN

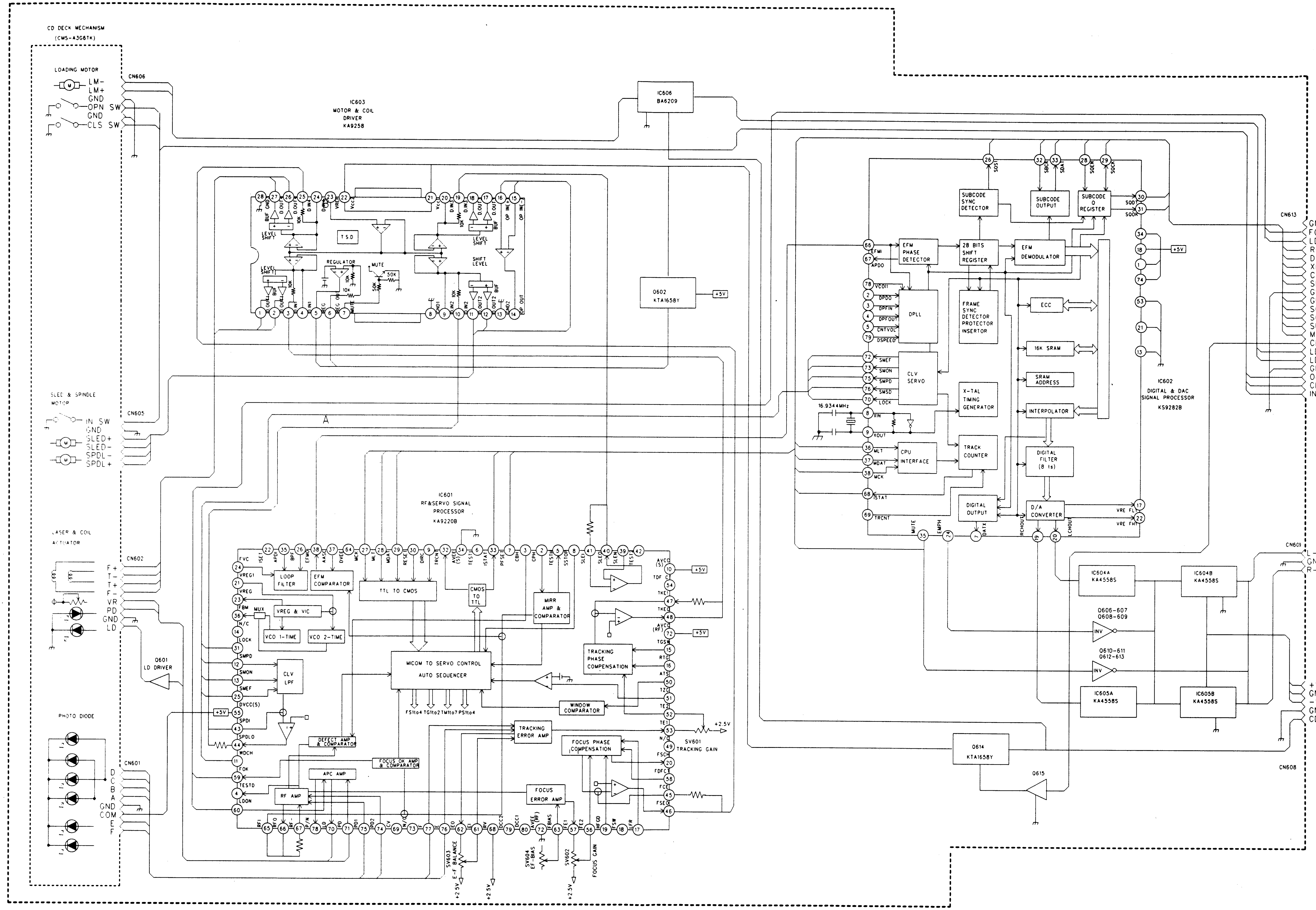


TUNER BLOCK [PCB NO:A1U-309]
FM FRONT END
1) EXCEPT VKHF-201V
2) VER-"V1" : FE415-G11
LA1851
AM MIX
AM RF
AM OSC
FM IF
FM DET
FM LEVEL DET
AGC
COMP
PILOT DET
TRIG
LED DRIVER
P.D
VCO
F F 38kHz
F F 19kHz ∠90°
F F 19kHz ∠0°
V-REG
ALC
AM DET
BUFF
MUTE
6dB
DECODER
ST-SW
MUTING CIRCUIT
Q209
Q210
FE202
AM ANT/RF BAND SEL-SW
• ANT COIL
MW:T201(AAT-035)
LW:T202(AAT-030)
SW:T202(AAT-037)
• RF BAND SEL-SW
MW:Q202
LW/SW:Q203
J16
5.6V
CSV
CST
CK
DATA OUT-IN
DATA IN-OUT
GND
AM LOC OSC & SWITCHING
• AM LOC OSC COIL
MW:T203(AAO-024)
LW/SW:T204(AAO-025)
• SWITCHING
MW:Q204
LW/SW Q205
AM IF DET
T205
FM IF DET
T206
TUND LEVEL ADJ
AM: SV203
FM: SV202
FM SEPARETION ADJ
SV201
LOW PASS FILTER (VOLTAGE TUNING)
Q225-Q226
TUNER SIGNAL
JK301
LC7218
REFERENCE DRIVER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16.1/17 4BIT
12BIT PROGRAMMABLE DRIVER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
X OUT
FM IN
AM IN
CE
DI
CL
DO
SYC
PD1
PD2
HCTR
LCTR
VDD
GND
OUT0
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
IN0
IN1
BAND SEL-SWITCHING
FM:Q208
MW:Q207
LW/SW:Q206
MD/VCR SIGNAL
CDP SIGNAL
TO CDP PCB SIGNAL INPUT
P29
J08
+12V
-12V
GND
x1/x2 SPEED
TO AMP BLK(P08)
MIC PCB BLOCK
PCB NO: A2U-152Q(AC-200) A2U-153Q(AC-300)
MIC PCB
JK101
J11
P11
IC302
MC4558D
IC303
GD4052B (DUAL 4-CH ANALOG MULTI/DEMULTIPLEXER)
ANALOG SW
TG
1-of-4 decoder & level converter
Vdd=Pin16
Vss=Pin8
Vee=Pin17
IC312
MC4558D
IC304 M5229P
IN2L
IN1L
IN2R
IN1R
ANALOG SWITCH REGISTER PORT
LATCH
BANDPASS DATA
GAIN DATA
8 BIT SHIFT REGISTER
CONTROL
LATCH SIG.
DI
CLK
S
TEST1
TEST2
IC306 NJU-7305
IC306 [ELEC VR]
NC
VDD
VCC
VSS
VEE
IC305 M5229P
[7BAND GRAPHIC EQUALIZER]
47K
10K
560
REC SIGNAL
PRE-AMP/EQ BLOCK [PCB NO:A1U-309]
P31
MUTE1
PRE-L
GND
PRE-R
J31
TAPE BLOCK PCB NO:A1U-309
PB PEAK Q401-402
BA3416BL
TAPE I/II PB EQ AMP
TAPE A
TAPE B
CrO2
Timming
OUT2
logic
HA12136AR DOLBY IC
BIAS REC/PB
BIAS
S/W
BUF
SIDE CHAIN
REC IN
REC OUT
PB SIGNAL OUT
PB I/II CONTROL CIRCUIT
Q405-Q408
REC BUFFER AMP
Q417-Q420
REC SIGNAL
AUTO REC LEVEL CONTROL
Q421-Q424
NR CIRCUIT CONTROL
Q416
UPC1330HA
TAPE I REC/PB SELECT
P22
P26
REC OSC CIRCUIT
T403
SV407-408
BEAT CUT CIRCUIT
REC AMP IC404
MC4558D
REC AMP & SELECT
Q434-Q440
CONTROL LINE
MECHA S/W CONTROL
Q448-Q458
GD4011B
REGULATOR IC FOR GD4011B
IC403
MC78L05
SW402
RESET SW
J18
RESET
REC MUTE
REC/PB(EQ)
REC/PB(NR)
PB MUTE
PB-I/II
NR SW
I-SW
II-SW
REC SW
X1/X2 SPEED
GND
TO FRONT PCB (P18)
P24
CrO2-I
CrO2-II
REC
PALY-I
PALY-II
DECK MOTOR
VOLUME CONTROL BLOCK
(MOTOR VOLUME DRIVE CIRCUIT & MUTE 1 CONTROL CIRCUIT
Q218-Q224
Q227-Q230
VR201
J15
GND
5.6V
VR DOWN
VR UP
LED
MUTE 2
TO FRONT PCB(P15)
PCB NO:A2U-152C(AC-200)
PCB NO:A1U-309C(AC-300)
P28
J10
TO AMP PCB SIGNAL INPUT(P10)
J28
[VOL LED PCB]
PCB NO:A2U-152H(AC-200)
PCB NO:A1U-309E(AC-300)
+12V
-12V
+5V
VCC
VEE

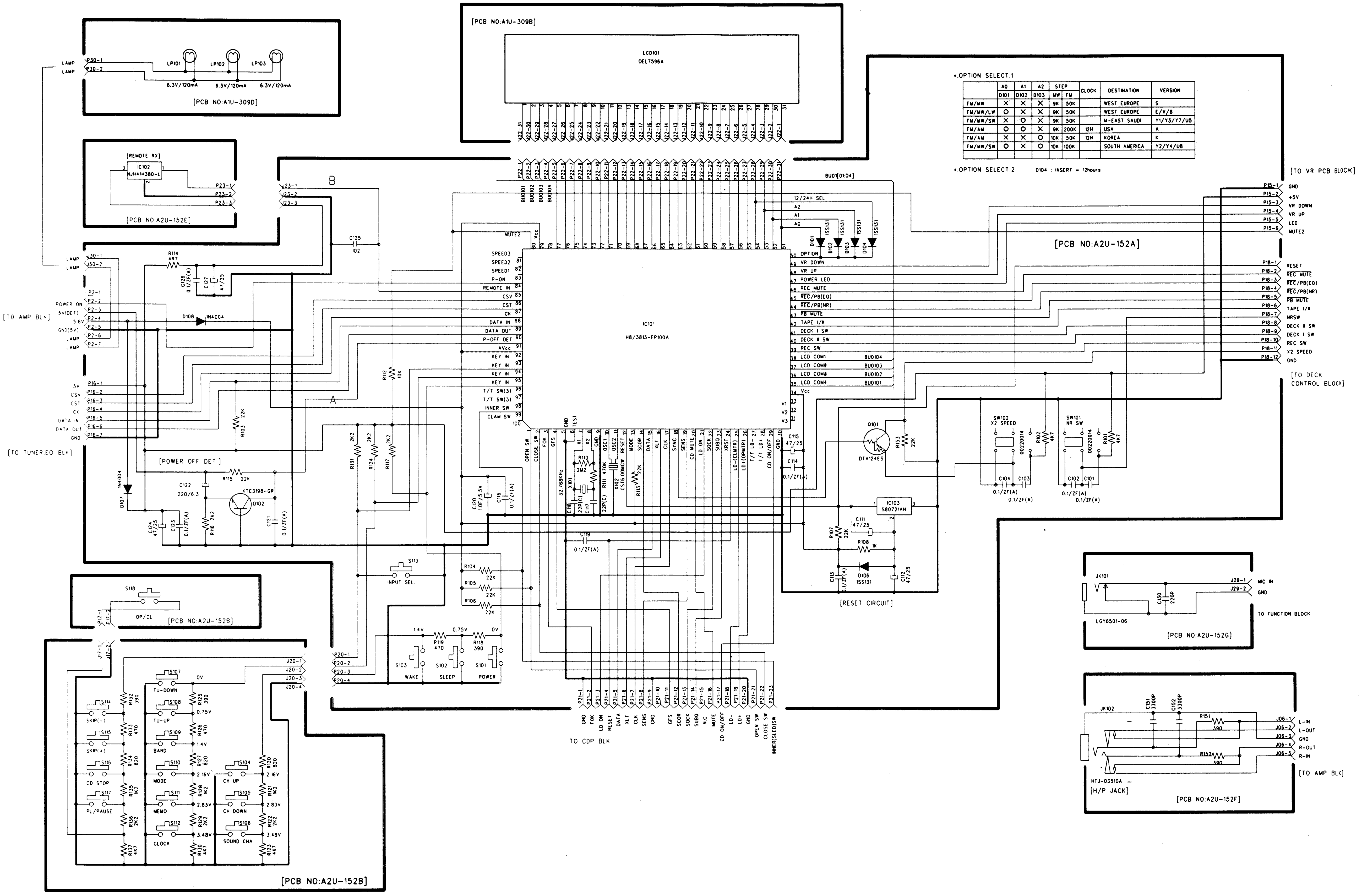
BLOCK DIAGRAM/POWER AMP


AMP PCB :A2U-151A
TO VOLUME PCB
P10
L-CH
GND
R-CH
POWER AMP SIGNAL INPUT
TO FRONT PCB
P07
POWER ON/OFF
5V(DET)
+5V
GND
LAMP B+
LAMP GND
POWER ON/OFF CONTROL INPUT
B+ LINE TO MI-COM & LCD LAMP
IC101 STK-4132II
[POWER AMP]
-Vcc
IN PUT-R
IN PUT-R
A
B
OUTPUT-L
OUTPUT-R
+Vcc
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
P06
L-CH
L-CH
GND
R-CH
R-CH
P11
MAIN AMP OUTPUT
L-CH
GND
GND
R-CH
[PROCTOR CIRCUIT]
Q903 - Q904
[H/P JACK PCB]
PCB NO:A2U-153D
J29
L-CH
L-CH
GND
R-CH
R-CH
[SPEAKER TERMINAL PCB]
A2U-151C
J11
L-CH
GND
GND
R-CH
OUT PUT
R-CH
L-CH
TE901
SPEAKER TERMINAL
•AC POWER SOURCE
1)E/V1/V2/B :230V/50Hz
2)S : 240V/50Hz
3)U5/U8/Y1/Y2 : 110/120/220/240V,50-60Hz
4)Y3/Y4/Y7 : 110/127/220/240V,50-60Hz
5)K : 220V/60Hz
6)A : 120V/60Hz
TO CDP PCB
P08
+12V(PRE)
GND
-12V
CD+12V
GND-CD
TO CDP PRE-AMP B+
B+ LINE TO CDP
TO MAIN PCB
PRE-AMP & TAPE BLOCK
P09
TAPE SPEED X2/X1
+12V
GND
GND
-12V
TAPE SPEED X2/X1 CONTROL INPUT
B+ LINE TO PRE-AMP & TAPE
MUTE-2 CONTROL LINE
[MUTING CIRCUIT]
Q905 - Q907
MUTING BIAS LINE
POWER AMP- Vcc LINE
[POWER ON/OFF CIRCUIT]
Q909 - Q920
POWER ON/OFF CONTROL LINE
TO DECK MECHANISIM
P25
SW MOTOR-I
SW MOTOR-II
A
B
MOTOR
DECK
+
-
J13
DECK MECHA
CHASSIS GND
B+ LINE
TO DECK MOTOR
[TAPE SPEED CONTROL CIRCUIT]
Q922 - Q923
GND DECK
B+ LINE
TO DECK MOTOR
[REGULATOR CIRCUIT]
1. PRE AMP,TAPE B+,& u-COM Vcc
+12V : IC902(KIA78L12P)
-12V : IC903(MC7912)
+5V :IC908(MC7812),IC906(MC7805)
2. DECK MOTOR
+12V : IC904(KIA78L12P)
3. +5V DETECTOR
+5V :IC907(KIA78L05P)
4. LAMP B+
+9V :IC905(MC7909)
•REGULATOR PCB NO(Q911,IC903):A2U-151B
[RECTIFIER CIRCUIT]
1. POWER AMP:
+20V/-20V : D911(BL4-06)
2 PRE AMP,TAPE,& u-COM B+:
+12V/-12V : D912 - D915
3. DECK MOTOR:
+12V : D916 - D917
4. +5V DETECTOR:
+12V :D932
5. CDP
+12V/-12V : D928,D929,D933,D034
P5
P14
PRE AMP,TAPE,u-COMAIN
P02
TO P/T AC INPUT
P01
AC IN
POWER TRANS
[U/Y]
J12
[P01]
VTG.SEL PCB
[U/Y] A4G-221
P12
SW1
P03
AC IN
[U/Y]
POWER TRANS
[E/V/S/B/A/K]
J02

BLOCK DIAGRAM/CD


CD DECK MECHANISM
(CMS-A3G8TK)
LOADING MOTOR
LM-
LM+
GND
OPN SW
GND
CLS SW
CN606
IC603
MOTOR & COIL
DRIVER
KA9258
IC606
BA6209
TSD
LEVEL SHIFT
REGULATOR
MUTE
SHIFT LEVEL
Q602
KTA1658Y
+5V
SLED & SPINDLE MOTOR
IN SW
GND
SLED+
SLED-
SPDL-
SPDL+
CN605
A
LASER & COIL ACTUATOR
F+
T-
T+
F-
VR
PD
GND
LD
CN602
Q601
LD DRIVER
PHOTO DIODE
D
C
B
A
GND
COM
E
F
CN601
IC601
RF&SERVO SIGNAL
PROCESSOR
KA9220B
LOOP FILTER
EFM COMPARATOR
TTL TO CMOS
CMOS TO TTL
MIRR AMP & COMPARATOR
VREG & VIC
MUX
VCO 1-TIME
VCO 2-TIME
MICOM TO SERVO CONTROL
AUTO SEQUENCER
FS1to4 TG1to2 TM1to7 PS1to4
CLV LPF
TRACKING PHASE COMPENSATION
WINDOW COMPARATOR
TRACKING ERROR AMP
DEFECT AMP & COMPARATOR
FOCUS OK AMP & COMPARATOR
APC AMP
RF AMP
FOCUS ERROR AMP
FOCUS PHASE COMPENSATION
SV601
TRACKING GAIN
+2.5V
SV603
E-F BALANCE
SV604
EF-BIAS
SV602
FOCUS GAIN
IC602
DIGITAL & DAC
SIGNAL PROCESSOR
KS9282B
SUBCODE SYNC DETECTOR
SUBCODE OUTPUT
SUBCODE Q REGISTER
EFM PHASE DETECTOR
28 BITS SHIFT REGISTER
EFM DEMODULATOR
DPLL
FRAME SYNC DETECTOR PROTECTOR INSERTOR
ECC
16K SRAM
SRAM ADDRESS
CLV SERVO
X-TAL TIMING GENERATOR
INTERPOLATOR
16.9344MHz
CPU INTERFACE
TRACK COUNTER
DIGITAL FILTER (8 fs)
DIGITAL OUTPUT
D/A CONVERTER
MUTE
EMPH
RCHOUT
LCHOUT
VRE FL
VRE FH
CN613
GND
FOK
LD-ON
RESET
DATA
XLT
CLK
SENSE
GND
GFS
SCOR
SOCK
SUBQ
MUTE
CD CON
LD-
LD+
GND
OPN SW
CLS SW
IN SW
CN609
L-CH
GND
R-CH
IC604A
KA4558S
IC604B
KA4558S
Q606-607
Q608-609
INV
Q610-611
Q612-613
INV
IC605A
KA4558S
IC605B
KA4558S
+12V
GND
-12V
GND
CD B+
CN608
Q614
KTA1658Y
Q615

VIII. SCHEMATIC DIAGRAM/FRONT

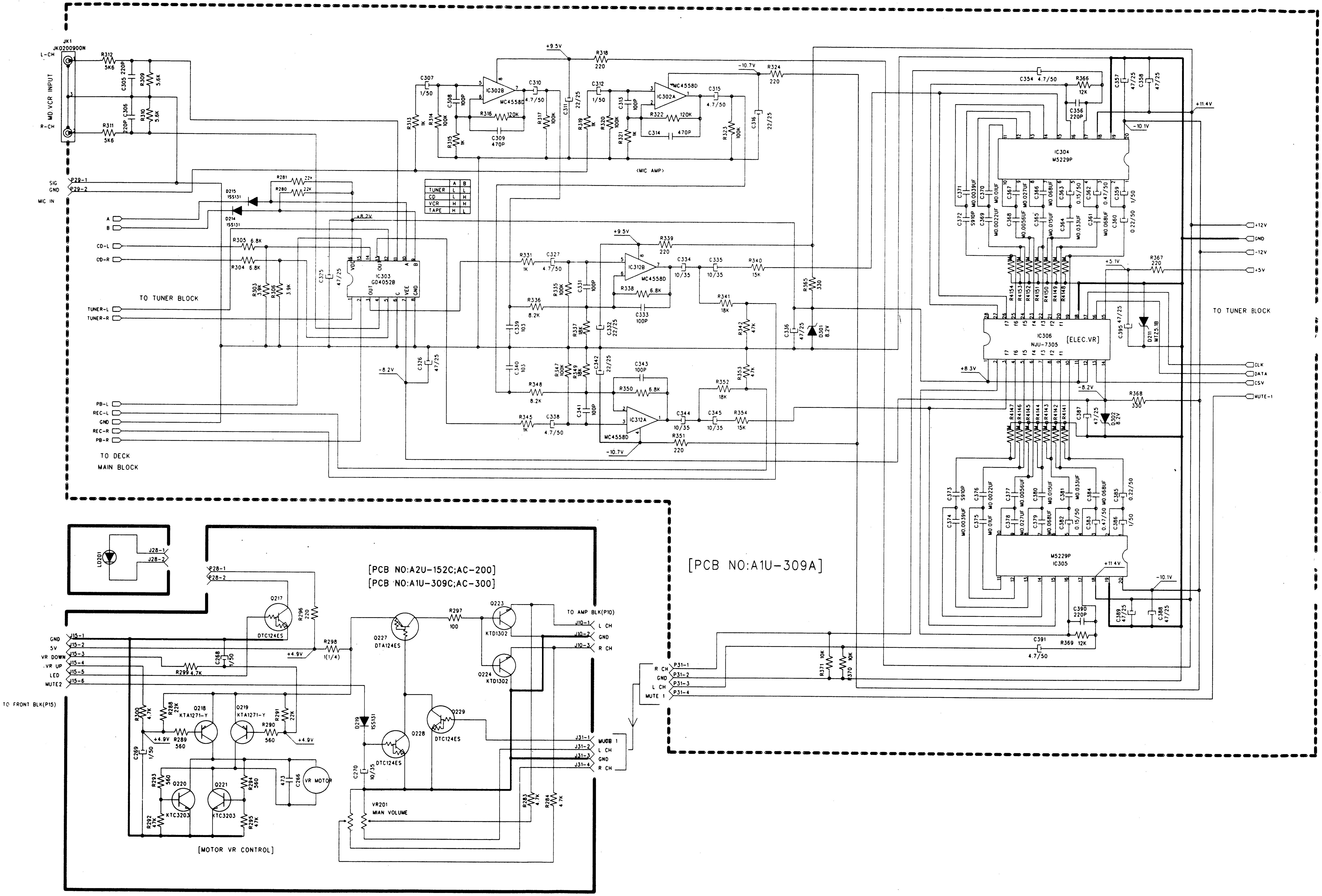

[PCB NO:A1U-309D]
LP101
LP102
LP103
6.3V/120mA
LAMP
[PCB NO:A1U-309B]
LCD101
OEL7596A
[REMOTE RX]
IC102
NJM41H380-L
[PCB NO:A2U-152E]
B
A
BU0101
BU0102
BU0103
BU0104
12/24H SEL
IC101
H8/3813-FP100A
[PCB NO:A2U-152A]
[TO VR PCB BLOCK]
GND
+5V
VR DOWN
VR UP
LED
MUTE2
RESET
REC MUTE
REC/PB(EQ)
REC/PB(NR)
PB MUTE
TAPE I/II
NRSW
DECK II SW
DECK I SW
REC SW
X2 SPEED
[TO DECK CONTROL BLOCK]
[TO AMP BLK]
POWER ON
5V(DET)
5.6V
GND(5V)
[TO TUNER,EQ BLK]
5V
CSV
CST
CK
DATA IN
DATA OUT
[POWER OFF DET]
KTC3198-GR
Q102
D108 1N4004
D107 1N4004
Q101
DTA124ES
IC103
S80721AN
[RESET CIRCUIT]
D106 1SS131
SW102 X2 SPEED
SW101 NR SW
S113 INPUT SEL
S103 WAKE
S102 SLEEP
S101 POWER
S118 OP/CL
[PCB NO:A2U-152B]
S107 TU-DOWN
S108 TU-UP
S109 BAND
S110 MODE
S111 MEMO
S112 CLOCK
S104 CH UP
S105 CH DOWN
S106 SOUND CHA
S114 SKIP(-)
S115 SKIP(+)
S116 CD STOP
S117 PL/PAUSE
TO CDP BLK
JK101
LGY6501-06
MIC IN
TO FUNCTION BLOCK
[PCB NO:A2U-152G]
JK102
HTJ-03510A
[H/P JACK]
L-IN
L-OUT
R-OUT
R-IN
[PCB NO:A2U-152F]

•.OPTION SELECT.1

	A0	A1	A2	STEP		CLOCK	DESTINATION	VERSION
	D101	D102	D103	MW	FM			
FM/MW	×	×	×	9K	50K		WEST EUROPE	S
FM/MW/LW	○	×	×	9K	50K		WEST EUROPE	E/V/B
FM/MW/SW	×	○	×	9K	50K		M-EAST SAUDI	Y1/Y3/Y7/U5
FM/AM	○	○	×	9K	200K	12H	USA	A
FM/AM	×	×	○	10K	50K	12H	KOREA	K
FM/MW/SW	○	×	○	10K	100K		SOUTH AMERICA	Y2/Y4/U8

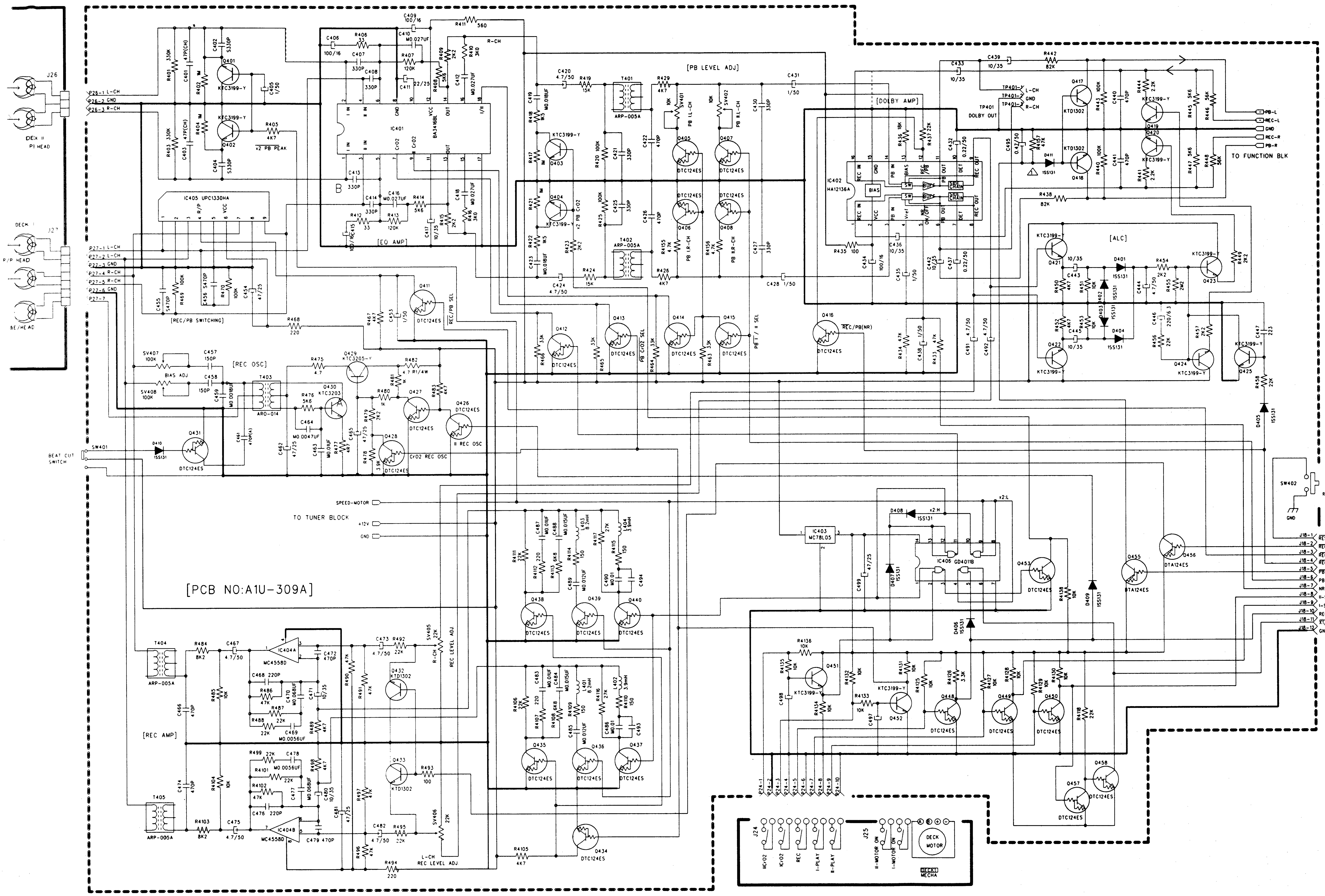
•.OPTION SELECT.2 D104 : INSERT = 12hours

SCHEMATIC DIAGRAM/FUNCTION/G-EQ

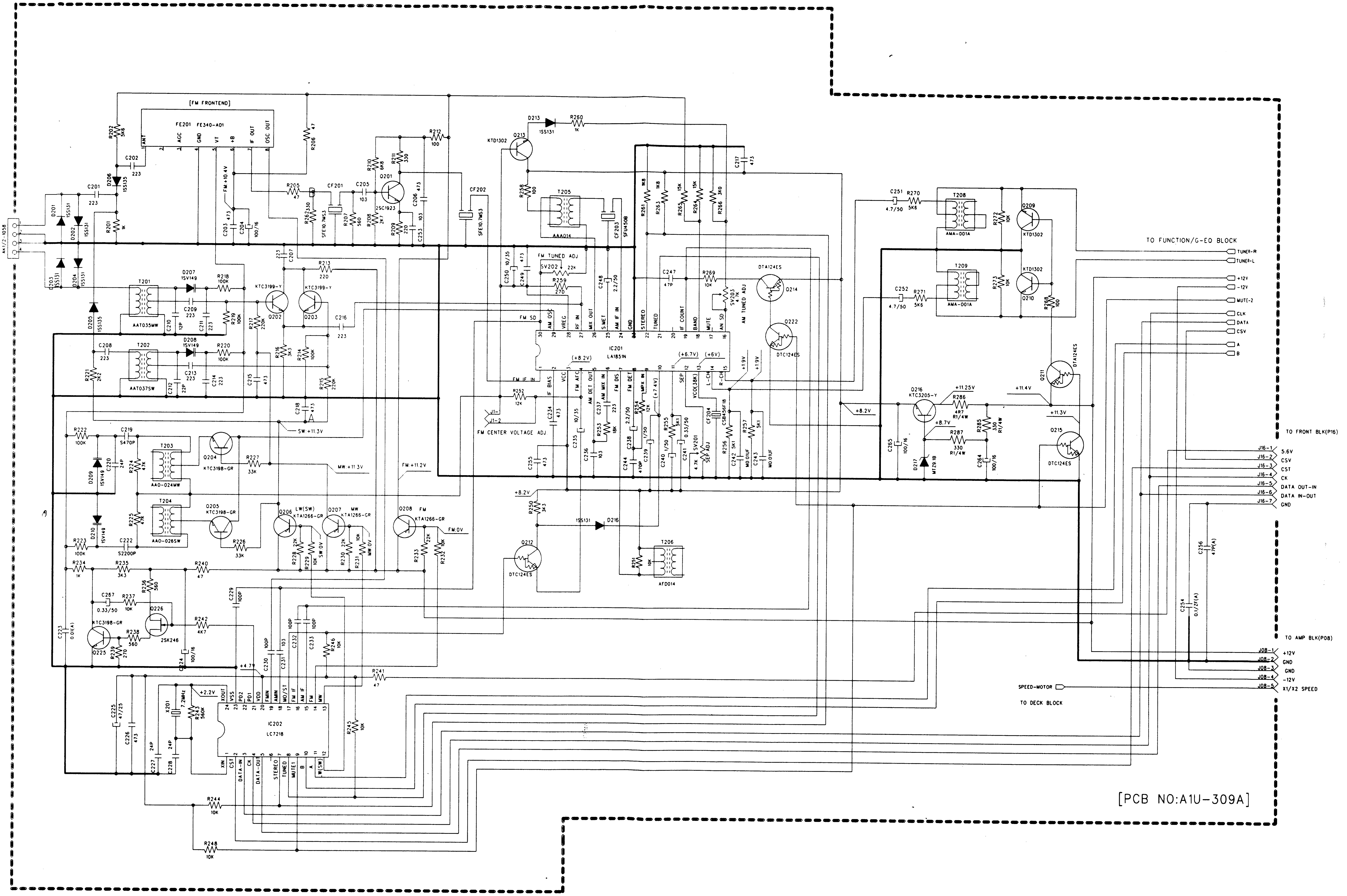

JK1
JK0200900N
L-CH
R-CH
MD VCR INPUT
R312 5K6
R311 5K6
C305 220P
C306 220P
R309 5.6K
R310 5.6K
SIG
GND
MIC IN
P29-1
P29-2
D215 1SS131
D214 1SS131
R281 22K
R280 22K
A
B
CD-L
CD-R
R305 6.8K
R304 6.8K
R303 3.9K
R306 3.9K
TO TUNER BLOCK
TUNER-L
TUNER-R
C325 47/25
IC303
GD4052B
+8.2V
-8.2V
C326 47/25
PB-L
REC-L
GND
REC-R
PB-R
TO DECK
MAIN BLOCK
+9.5V
R318 220
C307 1/50
IC302B
MC4558D
C310 4.7/50
C308 100P
R313 1K
R314 100K
R315 1K
R316 120K
C309 470P
R317 100K
C311 22/25
C312 1/50
IC302A
MC4558D
C315 4.7/50
C313 100P
R319 1K
R320 100K
R321 1K
R322 120K
C314 470P
R323 100K
C316 22/25
-10.7V
R324 220
<MIC AMP>
+9.5V
R339 220
R331 1K
C327 4.7/50
IC312B
MC4558D
C334 10/35
C335 10/35
R340 15K
R335 100K
C331 100P
R338 6.8K
R336 8.2K
C333 100P
R341 18K
R342 4.7K
C339 103
R337 10K
C332 22/25
R365 330
C336 47/25
D301 8.2V
C340 103
R347 100K
R349 10K
C342 22/25
C343 100P
R350 6.8K
R348 8.2K
R352 18K
R353 4.7K
R345 1K
C338 4.7/50
C341 100P
IC312A
MC4558D
C344 10/35
C345 10/35
R354 15K
R351 220
-10.7V
C354 4.7/50
R366 12K
C356 220P
C357 47/25
C358 47/25
+11.4V
-10.1V
IC304
M5229P
C371 M0.0039UF
C372 5900P
C369 M0.0022UF
C370 M0.01UF
C368 M0.0056UF
C367 M0.027UF
C366 M0.068UF
C365 M0.015UF
C364 M0.033UF
C363 0.15/50
C362 0.47/50
C361 M0.068UF
C360 0.22/50
C359 1/50
+12V
GND
-12V
+5V
+5.1V
R367 220
R4154
R4153
R4152
R4151
R4150
R4149
R4148
TO TUNER BLOCK
IC306
NJU-7305
[ELEC.VR]
C395 47/25
D211 MTZ5.1B
CLK
DATA
CSV
MUTE-1
+8.3V
-8.2V
R368 330
R4147
R4146
R4145
R4144
R4143
R4142
R4141
C387 47/25
D302 8.2V
C373 5900P
C374 M0.0039UF
C376 M0.0022UF
C375 M0.01UF
C377 M0.0056UF
C378 M0.027UF
C380 M0.015UF
C379 M0.068UF
C381 M0.033UF
C382 0.15/50
C384 M0.068UF
C383 0.47/50
C385 0.22/50
C386 1/50
M5229P
IC305
+11.4V
-10.1V
C390 220P
C389 47/25
C388 47/25
C391 4.7/50
R369 12K
R371 10K
R370 10K
R CH
GND
L CH
MUTE 1
P31-1
P31-2
P31-3
P31-4
[PCB NO:A1U-309A]
LD201
J28-1
J28-2
P28-1
P28-2
[PCB NO:A2U-152C;AC-200]
[PCB NO:A1U-309C;AC-300]
Q217
DTC124ES
R296 220
R298 1(1/4)
+4.9V
Q227
DTA124ES
R297 100
Q223
KTD1302
Q224
KTD1302
TO AMP BLK(P10)
J10-1 L CH
J10-2 GND
J10-3 R CH
GND J15-1
5V J15-2
VR DOWN J15-3
VR UP J15-4
LED J15-5
MUTE2 J15-6
TO FRONT BLK(P15)
C268 1/50
R299 4.7K
R300 4.7K
R288 22K
Q218 KTA1271-Y
Q219 KTA1271-Y
R291 22K
R290 560
R289 560
+4.9V
C269 1/50
R293 560
Q220
Q221
R294 560
KTC3203
KTC3203
R292 4.7K
R295 4.7K
C266 473
VR MOTOR
[MOTOR VR CONTROL]
D219 1SS131
Q228
DTC124ES
Q229
DTC124ES
C270 10/35
VR201
MIAN VOLUME
J31-1 MUTE 1
J31-2 L CH
J31-3 GND
J31-4 R CH
R283 4.7K
R284 4.7K

	A	B
TUNER	L	L
CD	L	H
VCR	H	H
TAPE	H	L

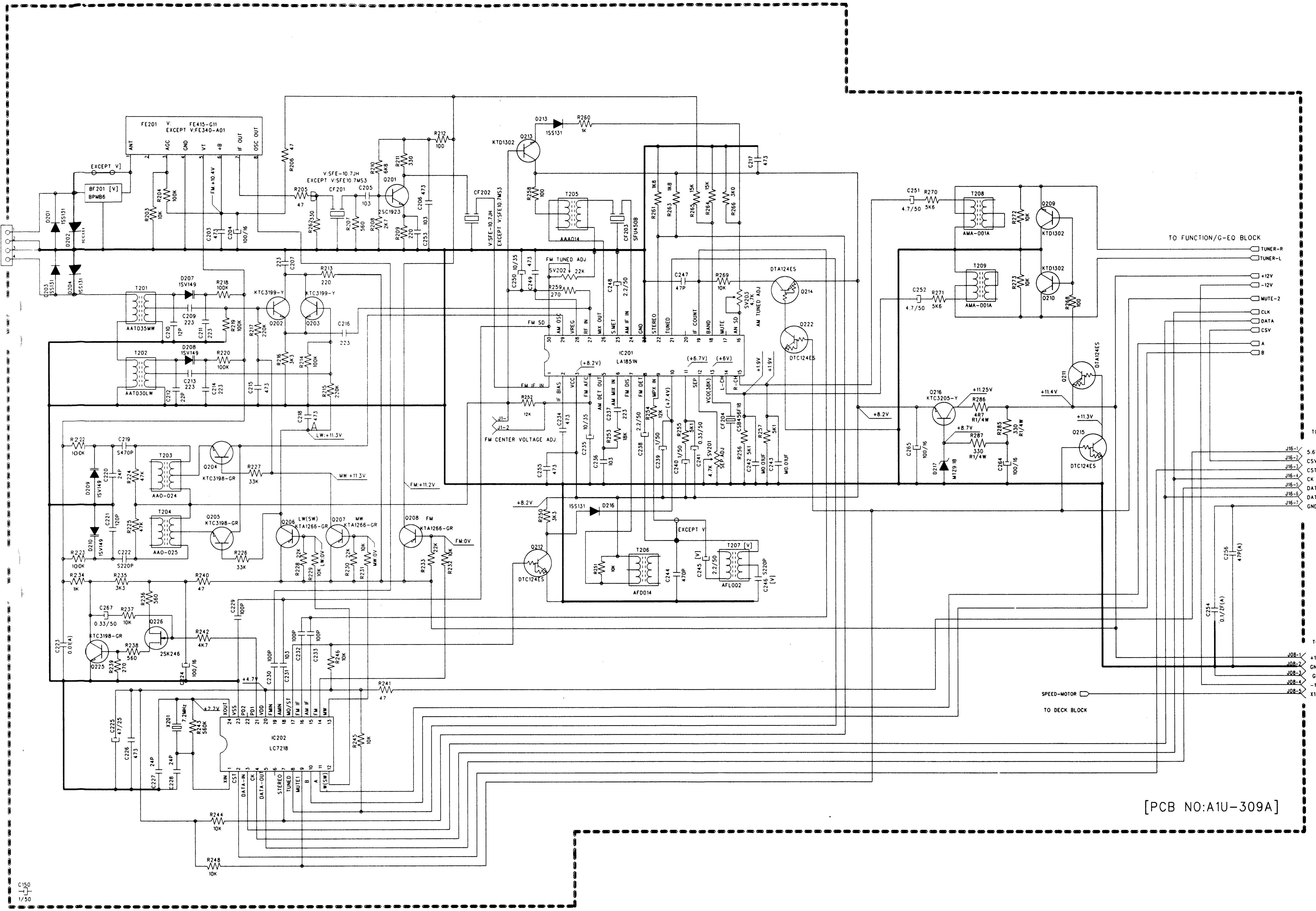
SCHEMATIC DIAGRAM/DECK


J26
DECK II
PB HEAD
DECK I
J27
R/P HEAD
ER/HEAD
P26-1 L-CH
P26-2 GND
P26-3 R-CH
P27-1 L-CH
P27-2 L-CH
P27-3 GND
P27-4 R-CH
P27-5 R-CH
P27-6 GND
P27-7
IC401
BA3416BL
[EQ AMP]
IC405 UPC1330HA
[REC/PB SWITCHING]
[REC OSC]
BIAS ADJ
SV407 100K
SV408 100K
T403
ARO-014
KTC3205-Y
KTC3203
Q426
II REC OSC
CrO2 REC OSC
BEAT CUT SWITCH
SW401
SPEED-MOTOR
TO TUNER BLOCK
+12V
GND
[PCB NO:A1U-309A]
[PB LEVEL ADJ]
T401
ARP-005A
T402
ARP-005A
SV401
SV402
PB I L-CH
PB II L-CH
PB I R-CH
PB II R-CH
PB CrO2 SEL
PB I / II SEL
REC/PB SEL
REC/PB(NR)
[DOLBY AMP]
IC402
HA12136A
TP401
DOLBY OUT
TP401-L-CH
TP401-GND
TP401-R-CH
[ALC]
PB-L
REC-L
GND
REC-R
PB-R
TO FUNCTION BLK
KTD1302
KTC3199-Y
DTC124ES
1SS131
IC403
MC78L05
IC406 GD4011B
x2 H
x2 L
SW402
RESET
J18-1 RESET
J18-2 REC-MUTE
J18-3 REC/PB(EQ)
J18-4 REC/PB(NR)
J18-5 PB-MUTE
J18-6 PB-I / II
J18-7 NR-SW
J18-8 II-SW
J18-9 I-SW
J18-10 REC-SW
J18-11 X1/X2 SPEED
J18-12 GND
DTA124ES
T404
ARP-005A
T405
ARP-005A
[REC AMP]
IC404A
IC404B
MC4558D
SV405 22K
R-CH REC LEVEL ADJ
SV406 22K
L-CH REC LEVEL ADJ
KTD1302
J24
J25
CrO2
REC
I-PLAY
II-PLAY
II-MOTOR ON
I-MOTOR ON
DECK MOTOR
DECK I MECHA

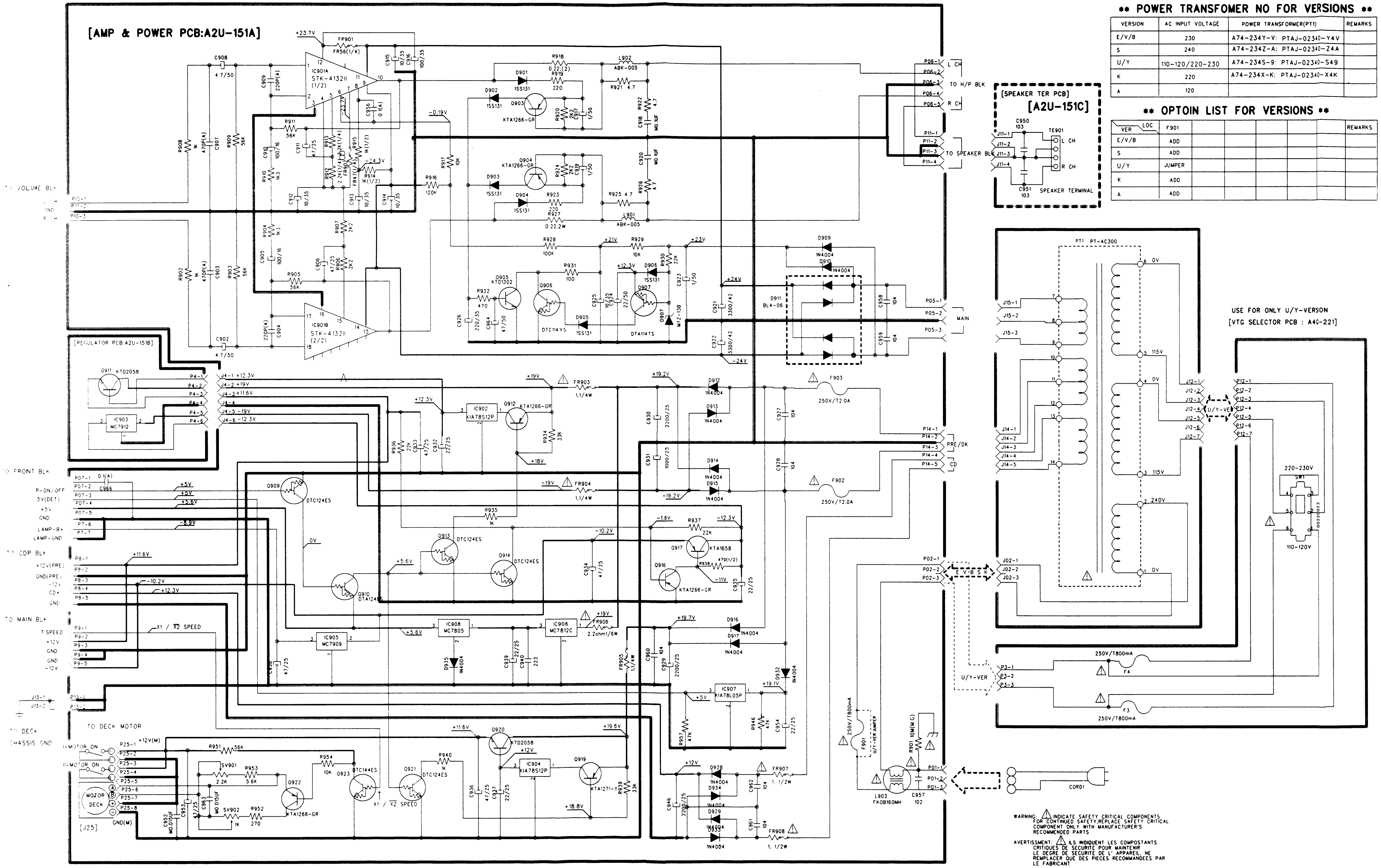
SCHEMATIC DIAGRAM/TUNER(FM, MW, SW BAND)


[FM FRONTEND]
FE201 FE340-A01
ANT
AGC
GND
VT
+8
IF OUT
OSC OUT
TE201 ANT/2-1058
CF201
CF202
SFE10.7MS3
0201 2SC1923
D213
R260 1K
1SS131
Q213 KTD1302
T205
AAA014
CF203 SFU450B
FM TUNED ADJ
SV202 22K
IC201 LA1851N
FM SD
AM OSC
VREG
RF IN
MIX OUT
S MET
AM IF IN
GND
STEREO
TUNED
IF COUNT
BAND
MUTE
AM SD
FM IF IN
IF BIAS
VCC
FM AFC
AM DET OUT
AM MIX IN
FM DIS
FM DET
MPX IN
SEP
VCO(38K)
L-CH
R-CH
AM TUNED ADJ
SV203
DTA124ES
Q214
Q222
DTC124ES
FM CENTER VOLTAGE ADJ
SEP ADJ
SV201
CSB456F18
T201
AAT035MW
T202
AAT037SW
D207 1SV149
D208 1SV149
KTC3199-Y
Q202
Q203
T203
AAO-024MW
T204
AAO-026SW
Q204 KTC3198-GR
Q205 KTC3198-GR
Q206 LW(SW) KTA1266-GR
Q207 MW KTA1266-GR
Q208 FM KTA1266-GR
SW:+11.3V
MW:+11.3V
FM:+11.2V
FM:0V
SW 0V
MW 0V
D209 1SV149
D210 1SV149
Q225 KTC3198-GR
Q226 2SK246
+8.2V
Q212 DTC124ES
D216 1SS131
T206
AFD014
IC202 LC7218
X201 7.2MHz
XOUT
VSS
PD2
PD1
VDD
FMIN
AMIN
MO/ST
FM IF
AM IF
FM
MW
XIN
CST
CK
DATA-IN
DATA-OUT
STEREO
TUNED
MUTE1
B
A
W(SW)
+2.2V
+4.7V
T208
AMA-001A
T209
Q209 KTD1302
Q210 KTD1302
Q211 DTA124ES
Q215 DTC124ES
Q216 KTC3205-Y
D217 MTZ9.1B
+11.25V
+8.7V
+11.4V
+11.3V
TO FUNCTION/G-EQ BLOCK
TUNER-R
TUNER-L
+12V
-12V
MUTE-2
CLK
DATA
CSV
A
B
TO FRONT BLK(P16)
J16-1 5.6V
J16-2 CSV
J16-3 CST
J16-4 CK
J16-5 DATA OUT-IN
J16-6 DATA IN-OUT
J16-7 GND
TO AMP BLK(P08)
J08-1 +12V
J08-2 GND
J08-3 GND
J08-4 -12V
J08-5 X1/X2 SPEED
SPEED-MOTOR
TO DECK BLOCK
[PCB NO:A1U-309A]

SCHEMATIC DIAGRAM/TUNER(FM, MW, LW BAND)


FE201 V: FE415-G11
EXCEPT V:FE340-A01
ANT
AGC
GND
VT
+B
IF OUT
OSC OUT
EXCEPT V]
BF201 [V]
BPMB6
D201 1SS131
D202 1SS131
D203 1SS131
D204 1SS131
R203 10K
R204 100K
C203 473
C204 100/16
FM:+10.4V
R206 47
R205 47
R262 330
V:SFE-10.7JH
EXCEPT V:SFE10.7MS3
CF201
C205 103
R207 560
R208 2K7
R209 220
R210 6K8
R211 330
Q201 2SC1923
C206 473
C253 103
R212 100
CF202
V:SFE-10.7JH
EXCEPT V:SFE10.7MS3
D213 1SS131
R260 1K
Q213 KTD1302
R258 100
T205
AAA014
CF203 SFU450B
C217 473
R261 1K8
R263 1K8
R265 15K
R264 15K
R266 3K0
C250 10/35
C249 473
FM TUNED ADJ
SV202 22K
R259 270
C248 2.2/50
C247 47P
R269 10K
SV203 4.7K
AM TUNED ADJ
DTA124ES Q214
Q222 DTC124ES
T201 AAT035MW
D207 1SV149
R218 100K
C209 223
C210 12P
C211 223
R219 100K
R217 220K
Q202 KTC3199-Y
Q203 KTC3199-Y
R213 220
C207 223
C216 223
R216 3K3
R214 100K
R215 220K
T202 AAT030LW
D208 1SV149
R220 100K
C212 22P
C213 223
C214 223
C215 473
C218 473
LW:+11.3V
FM SD
AM OSC
VREG
RF IN
MIX OUT
S.MET
AM IF IN
GND
STEREO
TUNED
IF COUNT
BAND
MUTE
AN SD
IC201 LA1851N
(+8.2V)
(+6.7V)
(+6V)
FM IF IN
IF BIAS
VCC
FM AFC
AM DET OUT
AM MIX IN
FM DIS
FM DET
MPX IN
SEP
VCO(38K)
L-CH
R-CH
+1.9V
+1.9V
R252 12K
J1-1
J1-2
FM CENTER VOLTAGE ADJ
C234 473
C235 10/35
C236 103
C237 223
R253 18K
C238 2.2/50
R254 12K
(+7.4V)
C239 1/50
C240 1/50
R255 5K1
C241 0.33/50
SV201 4.7K
SEP ADJ
CF204 CSB456F18
R256 5K1
C242 MO.01UF
C243 MO.01UF
R257 5K1
C255 473
+8.2V
C251 4.7/50
R270 5K6
T208 AMA-001A
R272 10K
Q209 KTD1302
C252 4.7/50
R271 5K6
T209 AMA-001A
R273 10K
Q210 KTD1302
R268 100
TO FUNCTION/G-EQ BLOCK
TUNER-R
TUNER-L
+12V
-12V
MUTE-2
CLK
DATA
CSV
A
B
Q211 DTA124ES
+11.4V
Q216 KTC3205-Y
+11.25V
R286 4R7 R1/4W
+8.7V
R287 330 R1/4W
R285 330 R1/4W
C265 100/16
D217 MTZ9.1B
C264 100/16
+11.3V
Q215 DTC124ES
TO FRONT BLK(P16)
J16-1 5.6V
J16-2 CSV
J16-3 CST
J16-4 CK
J16-5 DATA OUT-IN
J16-6 DATA IN-OUT
J16-7 GND
R222 100K
C219 S470P
C220 24P
D209 1SV149
R224 47K
T203 AAO-024
Q204 KTC3198-GR
R227 33K
MW:+11.3V
FM:+11.2V
C221 120P
D210 1SV149
R225 47K
T204 AAO-025
Q205 KTC3198-GR
R226 33K
R223 100K
C222 S220P
Q206 LW(SW) KTA1266-GR
Q207 MW KTA1266-GR
Q208 FM KTA1266-GR
FM:0V
R228 22K
R229 10K
LW:0V
R230 22K
R231 10K
MW:0V
R233 22K
R232 10K
R250 3K3
1SS131 D216
Q212 DTC124ES
EXCEPT V
T206 AFD014
R251 10K
C244 470P
C245 [V] 2.2/50
T207 [V] AFL002
C246 S220P [V]
C256 47P(A)
C254 0.1/ZF(A)
TO AMP BLK(P08)
J08-1 +12V
J08-2 GND
J08-3 GND
J08-4 -12V
J08-5 X1/X2 SPEED
SPEED-MOTOR
TO DECK BLOCK
R234 1K
R235 3K3
R240 47
R236 560
C267 0.33/50
R237 10K
Q226 2SK246
R242 4K7
Q225 KTC3198-GR
R238 560
R239 270
C223 0.01(A)
C224 100/16
C229 100P
+4.7V
C230 100P
C231 103
C232 100P
C233 100P
R246 10K
R241 47
C225 47/25
C226 473
C227 24P
C228 24P
X201 7.2MHz
R243 560K
+2.2V
XOUT
VSS
PD2
PD1
VDD
FMIN
AMIN
MO/ST
FM IF
AM IF
FM
MW
IC202 LC7218
XIN
CST
DATA-IN
CK
DATA-OUT
STEREO
TUNED
MUTE1
B
A
LW(SW)
R245 10K
R244 10K
R248 10K
C150 1/50
[PCB NO:A1U-309A]

SCHEMATIC DIAGRAM/POWER AMP


[AMP & POWER PCB:A2U-151A]
IC901A STK-413211 (1/2)
IC901B STK-413211 (2/2)
[REGULATOR PCB:A2U-151B]
[SPEAKER TER PCB]
[A2U-151C]
SPEAKER TERMINAL
L CH
R CH
TO H/P BLK
TO SPEAKER BLK
MAIN
PRE/DK
CD
PT1 PT-AC300
USE FOR ONLY U/Y-VERSION
[VTC SELECTOR PCB : A40-221]
220-230V
110-120V
U/Y-VER
E V/B S K
250V/T2.0A
250V/T1800mA
L903 FKOB160MH
CORD1
TO VOLUME BLK
TO FRONT BLK
P-ON/OFF
5V(DET)
+5V
GND
LAMP-B+
LAMP-GND
TO CDP BLK
+12V(PRE)
GND(PRE)
-12V
CD+
GND
TO MAIN BLK
T SPEED
+12V
GND
GND
-12V
TO DECK
CHASSIS GND
TO DECK MOTOR
MOTOR ON
MOTOR DECK
[J25]
GND(M)
X1 / X2 SPEED
IC902 KIA78S12P
IC903 MC7912
IC904 KIA78S12P
IC905 MC7909
IC906 MC7812C
IC907 KIA78L05P
IC908 MC7805
D911 BL4-06

** POWER TRANSFOMER NO FOR VERSIONS **

VERSION	AC INPUT VOLTAGE	POWER TRANSFORMER(PT1)	REMARKS
E/V/B	230	A74-234Y-V: PTAJ-02340-Y4V	
S	240	A74-234Z-A: PTAJ-02340-Z4A	
U/Y	110-120/220-230	A74-234S-9: PTAJ-02340-S49	
K	220	A74-234X-K: PTAJ-02340-X4K	
A	120		

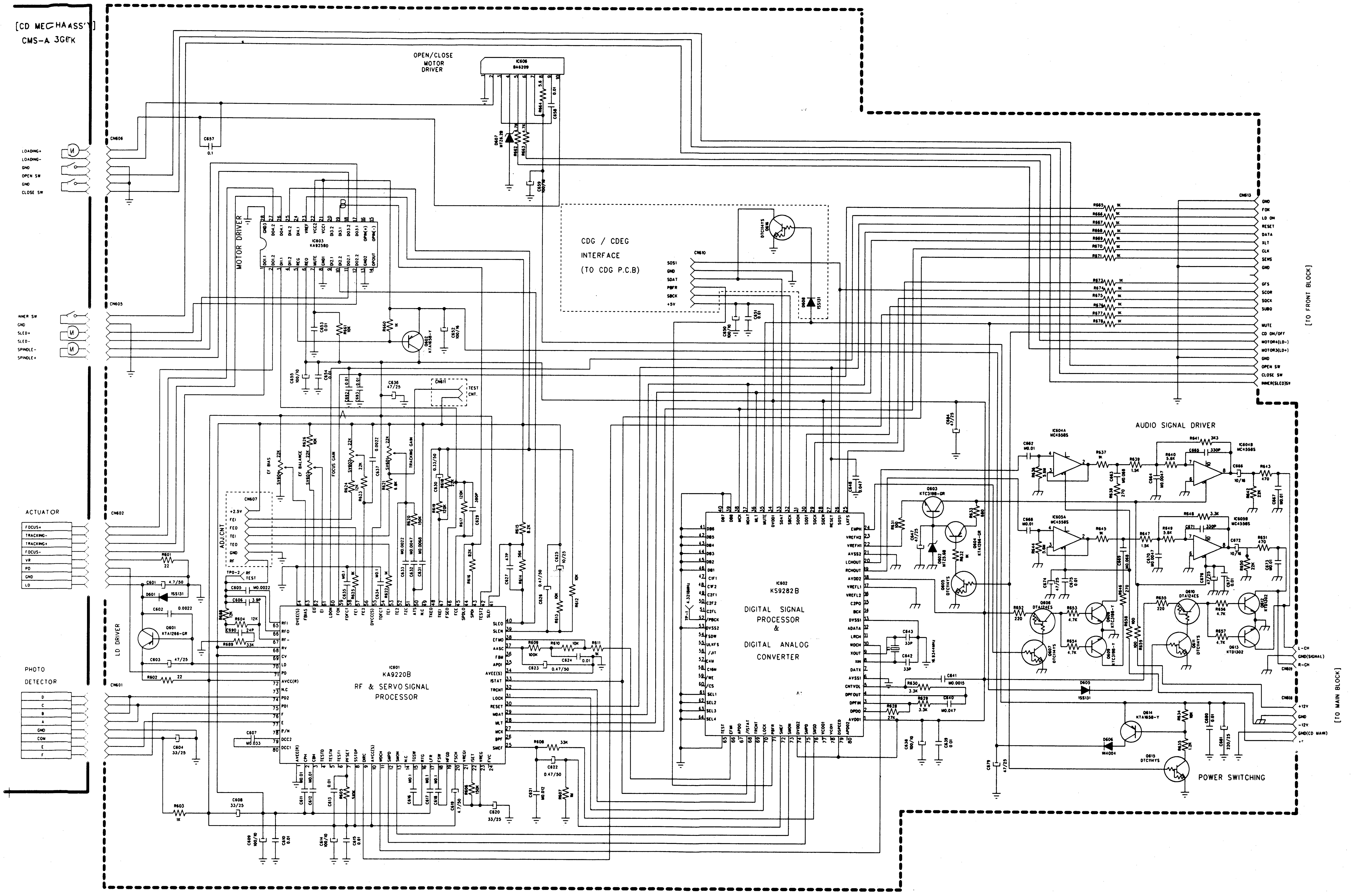
** OPTOIN LIST FOR VERSIONS **

VER \ LOC	F901						REMARKS
E/V/B	ADD						
S	ADD						
U/Y	JUMPER						
K	ADD						
A	ADD						

WARNING: ⚠ INDICATE SAFETY CRITICAL COMPONENTS
FOR CONTINUED SAFETY,REPLACE SAFETY CRITICAL
COMPONENT ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

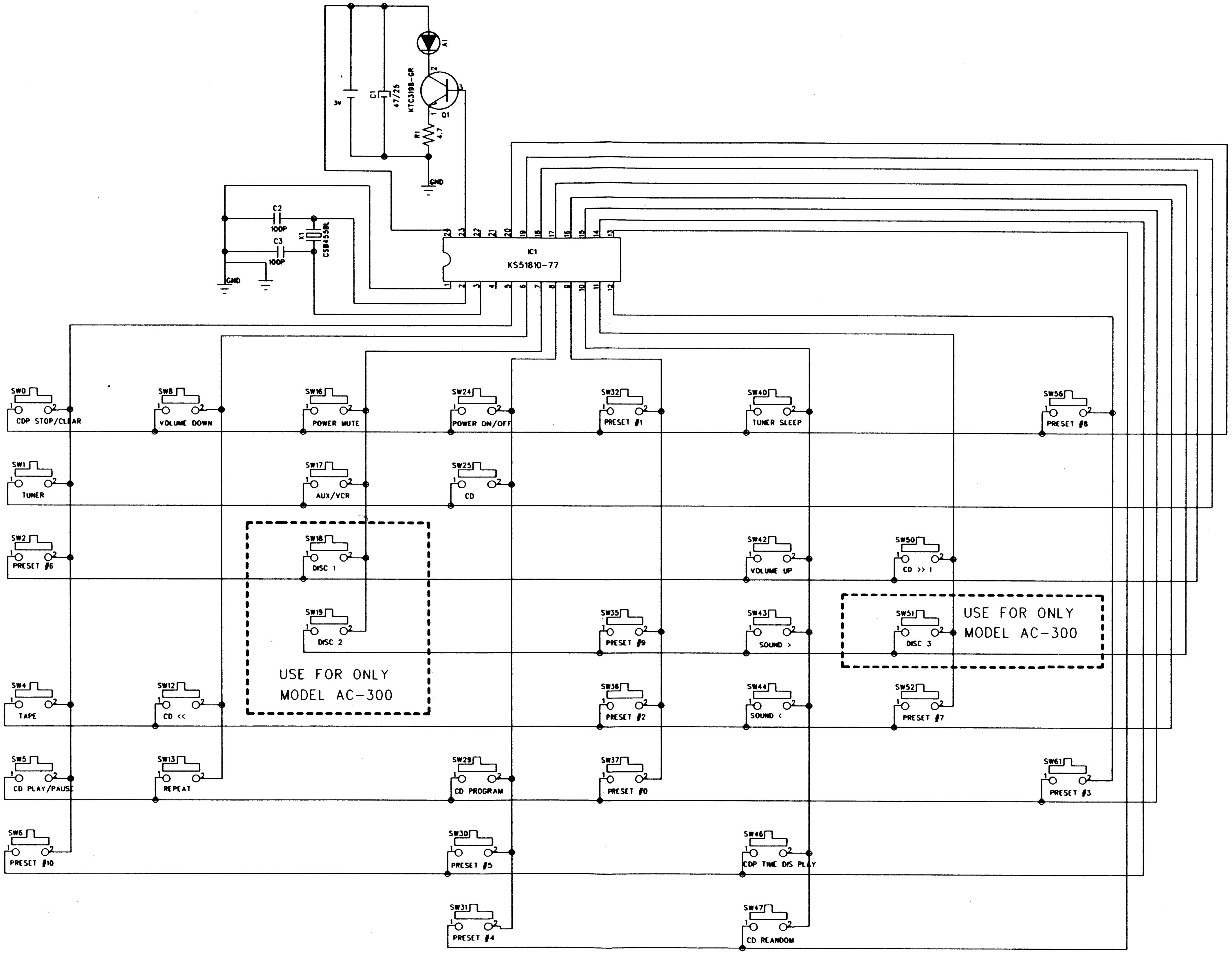
AVERTISSMENT: ⚠ ILS INDIQUENT LES COMPOSTANTS
CRITIQUES DE SECURITE POUR MAINTENIR
LE DEGRE DE SECURITE DE L' APPAREIL. NE
REMPLACER QUE DES PIECES RECOMMANDEES PAR
LE FABRICANT

SCHEMATIC DIAGRAM/CD


[CD MECHA ASS'Y]
CMS-A 3GFK
OPEN/CLOSE MOTOR DRIVER
IC606 BA6209
CN606
LOADING+
LOADING-
GND
OPEN SW
GND
CLOSE SW
MOTOR DRIVER
IC603 KA9258D
CN605
INNER SW
GND
SLED+
SLED-
SPINDLE-
SPINDLE+
CDG / CDEG INTERFACE (TO CDG P.C.B)
CN610
SOS1
GND
SDAT
PBFR
SBCK
+5V
CN611 TEST CNT.
ACTUATOR
CN602
FOCUS+
TRACKING-
TRACKING+
FOCUS-
VR
PD
GND
LD
LD DRIVER
CN607 ADJ.CNT
PHOTO DETECTOR
CN601
IC601 KA9220B RF & SERVO SIGNAL PROCESSOR
IC602 KS9282B DIGITAL SIGNAL PROCESSOR & DIGITAL ANALOG CONVERTER
CN613
GND
FOK
LD ON
RESET
DATA
XLT
CLK
SENS
GND
GFS
SCOR
SBCK
SUBQ
MUTE
CD ON/OFF
MOTOR+(LD-)
MOTOR-(LD+)
GND
OPEN SW
CLOSE SW
INNER(SLED)SW
[TO FRONT BLOCK]
AUDIO SIGNAL DRIVER
IC604A MC4558S
IC604B MC4558S
IC605A MC4558S
IC605B MC4558S
CN608
L-CH
GND(SIGNAL)
R-CH
+12V
GND
-12V
GND(CD MAIN)
[TO MAIN BLOCK]
POWER SWITCHING

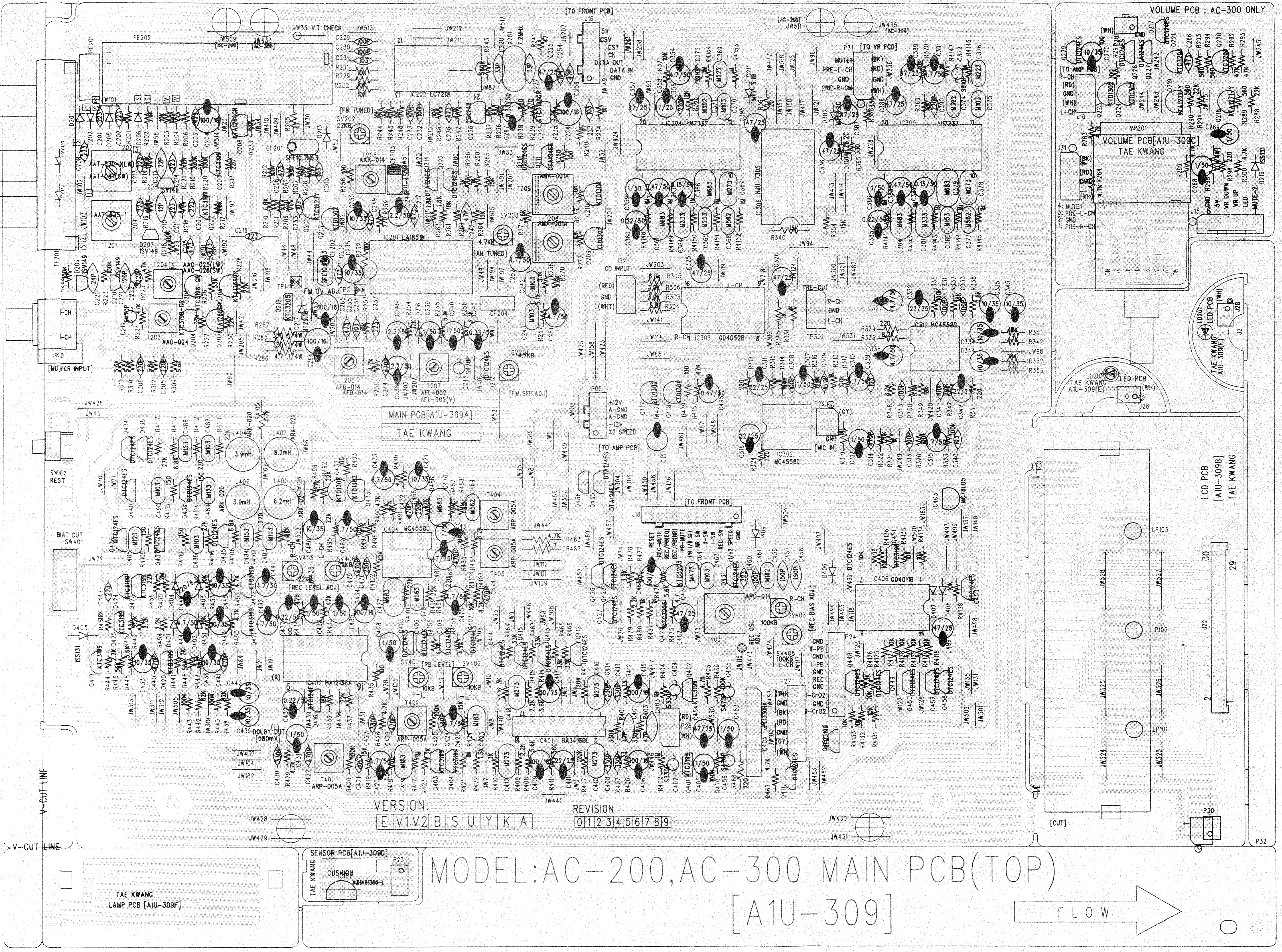
SCHEMATIC DIAGRAM/REMOTE

RC-S200/RC-S300


A1
KTC3198-GR
Q1
3V
C1
47/25
R1
4.7
GND
C2
100P
C3
100P
X1
CSB455BL
GND
IC1
KS51810-77
SW0
CDP STOP/CLEAR
SW8
VOLUME DOWN
SW16
POWER MUTE
SW24
POWER ON/OFF
SW32
PRESET #1
SW40
TUNER SLEEP
SW56
PRESET #8
SW1
TUNER
SW17
AUX/VCR
SW25
CD
SW2
PRESET #6
SW18
DISC 1
SW42
VOLUME UP
SW50
CD >> I
SW19
DISC 2
SW35
PRESET #9
SW43
SOUND >
SW51
DISC 3
USE FOR ONLY
MODEL AC-300
SW4
TAPE
SW12
CD <<
USE FOR ONLY
MODEL AC-300
SW36
PRESET #2
SW44
SOUND <
SW52
PRESET #7
SW5
CD PLAY/PAUSE
SW13
REPEAT
SW29
CD PROGRAM
SW37
PRESET #0
SW61
PRESET #3
SW6
PRESET #10
SW30
PRESET #5
SW46
CDP TIME DIS PLAY
SW31
PRESET #4
SW47
CD REANDOM

IX. PCB LAYOUT/MAIN

MAIN P.C.BOARD (A1U-309A~D)


VOLUME PCB : AC-300 ONLY
VOLUME PCB[A1U-309C]
TAE KWANG
MAIN PCB[A1U-309A]
TAE KWANG
LED PCB
TAE KWANG A1U-309(E)
LCD PCB [A1U-309B] TAE KWANG
SENSOR PCB[A1U-309D]
TAE KWANG LAMP PCB [A1U-309F]
V-CUT LINE
VERSION:
E V1 V2 B S U Y K A
REVISION
0 1 2 3 4 5 6 7 8 9
MODEL:AC-200,AC-300 MAIN PCB(TOP)
[A1U-309]
FLOW

*.OPTION TABLE *

1.THE OPTION LIST FOR MODEL

LOC.NO	AC-200	AC-300	POSITION
JW509	○	×	D-6
JW433	×	○	D-5
JW511	○	×	D-3
JW435	×	○	D-3
VOLUME PCB	×	○	D-2
LED PCB	×	○	C-2
SENSOR PCB	※	○	A-5

2.THE OPTION LIST FOR THE VERSIONS

	3BAND(LW)		2BAND	3BAND(SW)	REMARKS	POSITION
LOC	E/B	Y	S/K	U/Y		
JW101	○	○	○	×	JUMPER	D-6
JW102	○	○	×	×	JUMPER	D-6
JW103	×	×	○	○	JUMPER	C-6
JW207	○	×	○	○	JUMPER	C-5
C201	×	×	×	○	0.022uF	D-6
C202	×	×	×	○	0.022uF	D-6
C208	×	×	×	○	0.022uF	D-6
C213	○	○	×	○	0.022uF	D-6
C214	○	○	×	○	0.022uF	D-6
C218	○	○	×	○	0.047uF	C-6
C221	○	○	×	×	120P	C-6
C222	S220P	S220P	×	S2200P		C-6
C245	×	○	×	×	2.2/50V	C-5
C246	×	○	×	×	S220P	C-5
D205	×	×	×	○	1SS135	D-6
D206	×	×	×	○	1SS135	D-6
D208	○	○	×	○	1SV149	D-6
D210	○	○	×	○	1SV149	C-6
R201	×	×	×	○	1K	D-6
R202	×	×	×	○	5.6K	D-6
R203	×	○	×	×	10K	D-6
R204	×	○	×	×	100K	D-6
R214	○	○	×	○	100K	D-5
R215	○	○	×	○	220K	D-6
R220	○	○	×	○	100K	D-6
R221	×	×	×	○	2.2K	D-6
R223	○	○	×	○	100K	C-6
R225	○	○	×	○	47K	C-6
R226	○	○	×	○	33K	C-6
R228	○	○	×	○	22K	C-6
R229	○	○	×	○	10K	D-5
R304	6.8K	18K	6.8K	6.8K	CD	C-4
R305	6.8K	18K	6.8K	6.8K	CD	C-4
R311	5.6K	18K	5.6K	5.6K	AUX	C-6
R312	5.6K	18K	5.6K	5.6K	AUX	C-6
R315	1K	3K	1K	1K	MIC	C-3
R321	1K	3K	1K	1K	MIC	C-3
R338	6.8K	18K	6.8K	6.8K	TOTAL	C-3
R350	6.8K	18K	6.8K	6.8K	TOTAL	C-3
R438	82K	220K	82K	82K	TAPE	B-6
R442	82K	220K	82K	82K	TAPE	B-6
FE201	FE340A01	FE415G11	FE340A01	FE340A01		D-6
CF201	10.7MS3	10.7MJA	10.7MS3	10.7MS3	SFE-•••	D-5
CF202	10.7MS3	10.7MJA	10.7MS3	10.7MS3	SFE-•••	C-5
T202	AAT030-1	AAT030-1	×	AAT-037		D-6
T204	AAO-025	AAO-025	×	AAO-026		C-6
T207	×	AFL-002	×	×		C-5
Q203	○	○	×	○	KTC3199Y	D-6
Q205	○	○	×	○	KTC3198GR	C-6
Q206	○	○	×	○	KTA1266GR	C-6

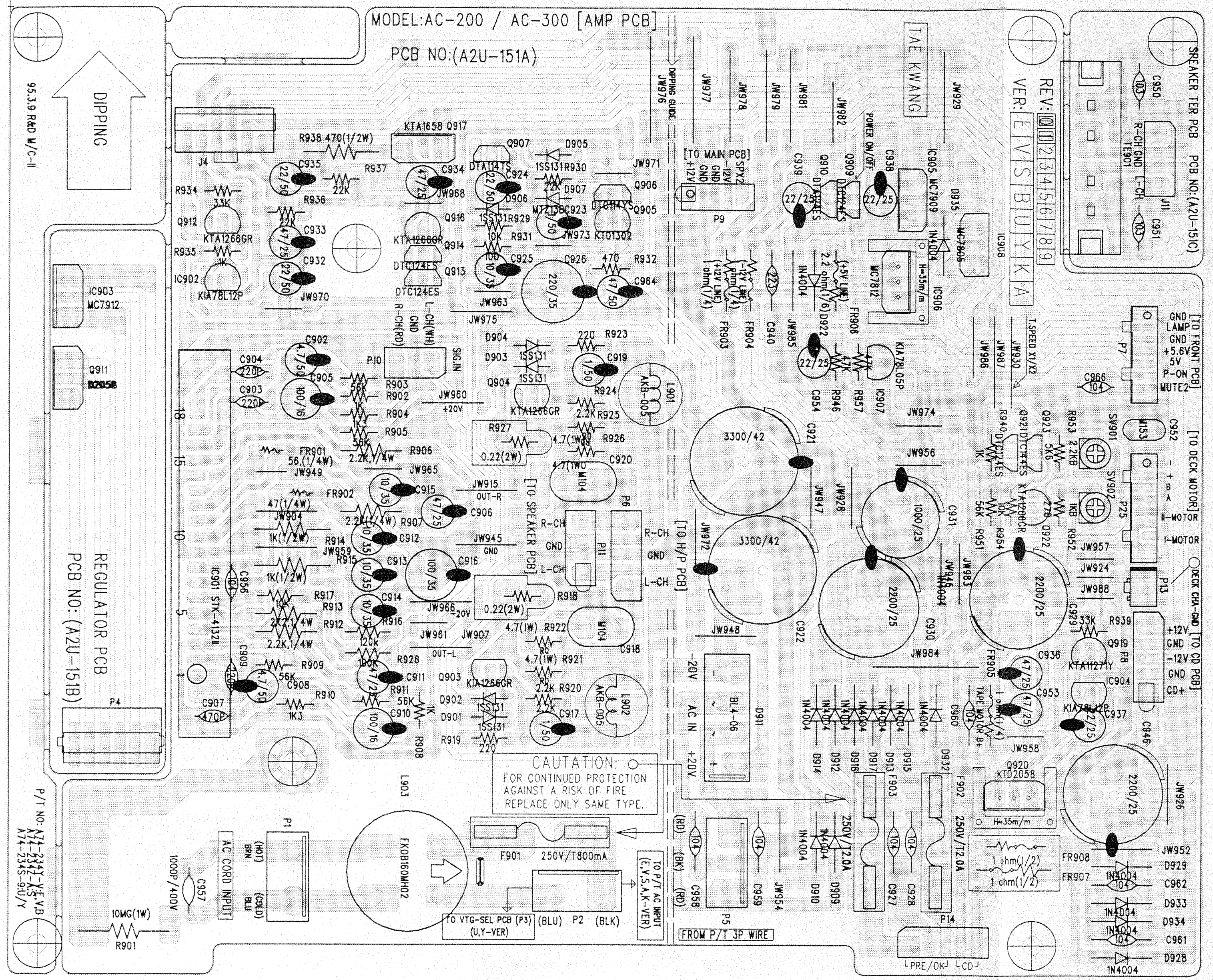
※V2-VERSION: V1-VER과 동일(단, CF201,202: 10.7MJA→10.7MS3로 변경)

3.THE OPTION LIST FOR APPLICATED CE MARK

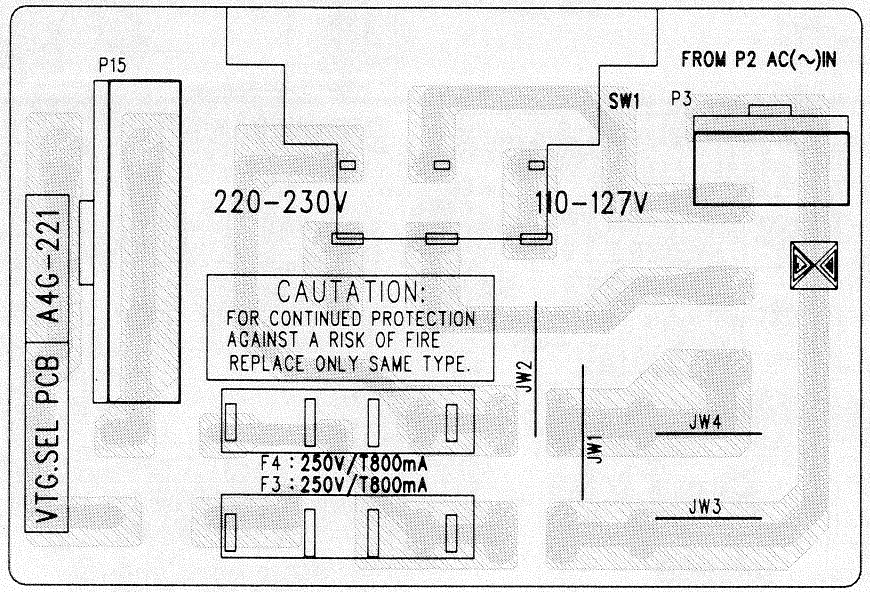
LOC	APPLICATED PART	POSITION
FE201	FE415G11	D-6
R203	10K	D-6
R204	100K	D-6

PCB LAYOUT/POWER SUPPLY

1. AMP P.C BOARD (A2U-151A~C)


MODEL:AC-200 / AC-300 [AMP PCB]
PCB NO:(A2U-151A)
DIPPING
TAE KWANG
REV: 0 1 2 3 4 5 6 7 8 9
VER: E V S B U Y K A
PCB NO:(A2U-151C)
SPEAKER TER PCB
REGULATOR PCB
PCB NO: (A2U-151B)
IC901 STK-4132II
[TO SPEAKER PCB]
[TO H/P PCB]
[TO MAIN PCB]
[TO FRONT PCB]
[TO DECK MOTOR]
[TO CD PCB]
AC CORD INPUT
TO VTG-SEL PCB (P3) (U,Y-VER)
TO P/T AC INPUT (E,V,S,A,K-VER)
FROM P/T 3P WIRE
CAUTATION:
FOR CONTINUED PROTECTION
AGAINST A RISK OF FIRE
REPLACE ONLY SAME TYPE.
F901 250V/T800mA
F902 250V/T2.0A
F903 250V/T2.0A
3300/42
2200/25
1000/25
BL4-06
AKB-005
FKOB160W102

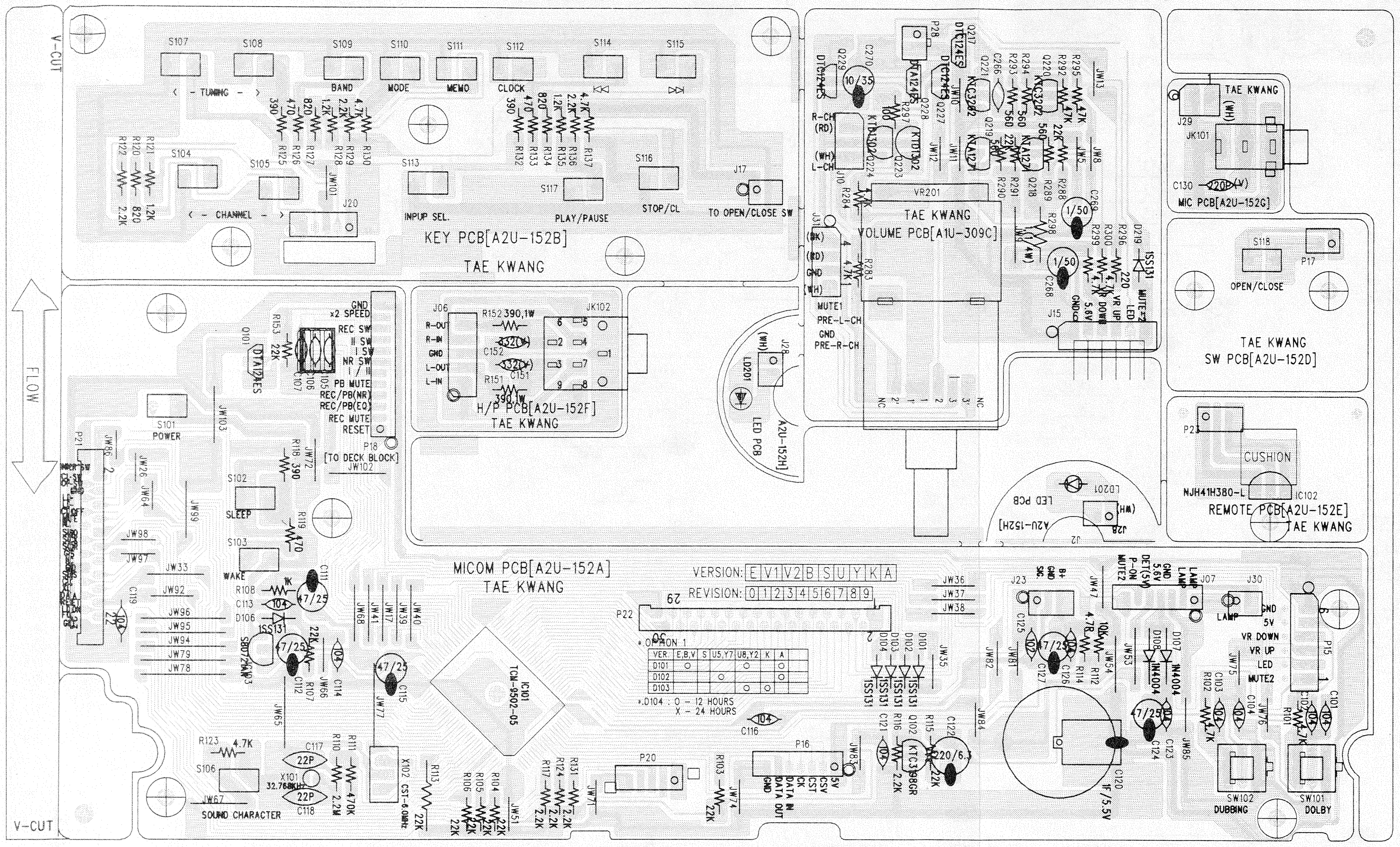
2. VOLTAGE SELECTOR P.C BOARD (A4G-221)
(USE FOR ONLY U, Y VERSION)


P15
FROM P2 AC(~)IN
SW1
P3
220-230V
110-127V
VTG.SEL PCB A4G-221
CAUTATION:
FOR CONTINUED PROTECTION
AGAINST A RISK OF FIRE
REPLACE ONLY SAME TYPE.
F4 : 250V/T800mA
F3 : 250V/T800mA
JW2
JW1
JW4
JW3

VER / LOC NO	E, V	B	S	U,Y	A	K
F901	0	0	0	JUMPER	0	0

PCB LAYOUT/FRONT

FRONT P.C BOARD (A2U-152A~H)


V-CUT
FLOW
KEY PCB[A2U-152B]
TAE KWANG
TAE KWANG
VOLUME PCB[A1U-309C]
TAE KWANG
MIC PCB[A2U-152G]
TAE KWANG
SW PCB[A2U-152D]
H/P PCB[A2U-152F]
TAE KWANG
LED PCB
A2U-152H
REMOTE PCB[A2U-152E]
TAE KWANG
MICOM PCB[A2U-152A]
TAE KWANG
VERSION: E V1 V2 B S U Y K A
REVISION: 0 1 2 3 4 5 6 7 8 9
S101 POWER
S102 SLEEP
S103 WAKE
S106 SOUND CHARACTER
S117 PLAY/PAUSE
S116 STOP/CL
S113 INPUT SEL.
S118 OPEN/CLOSE
SW102 DUBBING
SW101 DOLBY
IC101 TCM-0502-05
CUSHION
NJH41H380-L
V-CUT

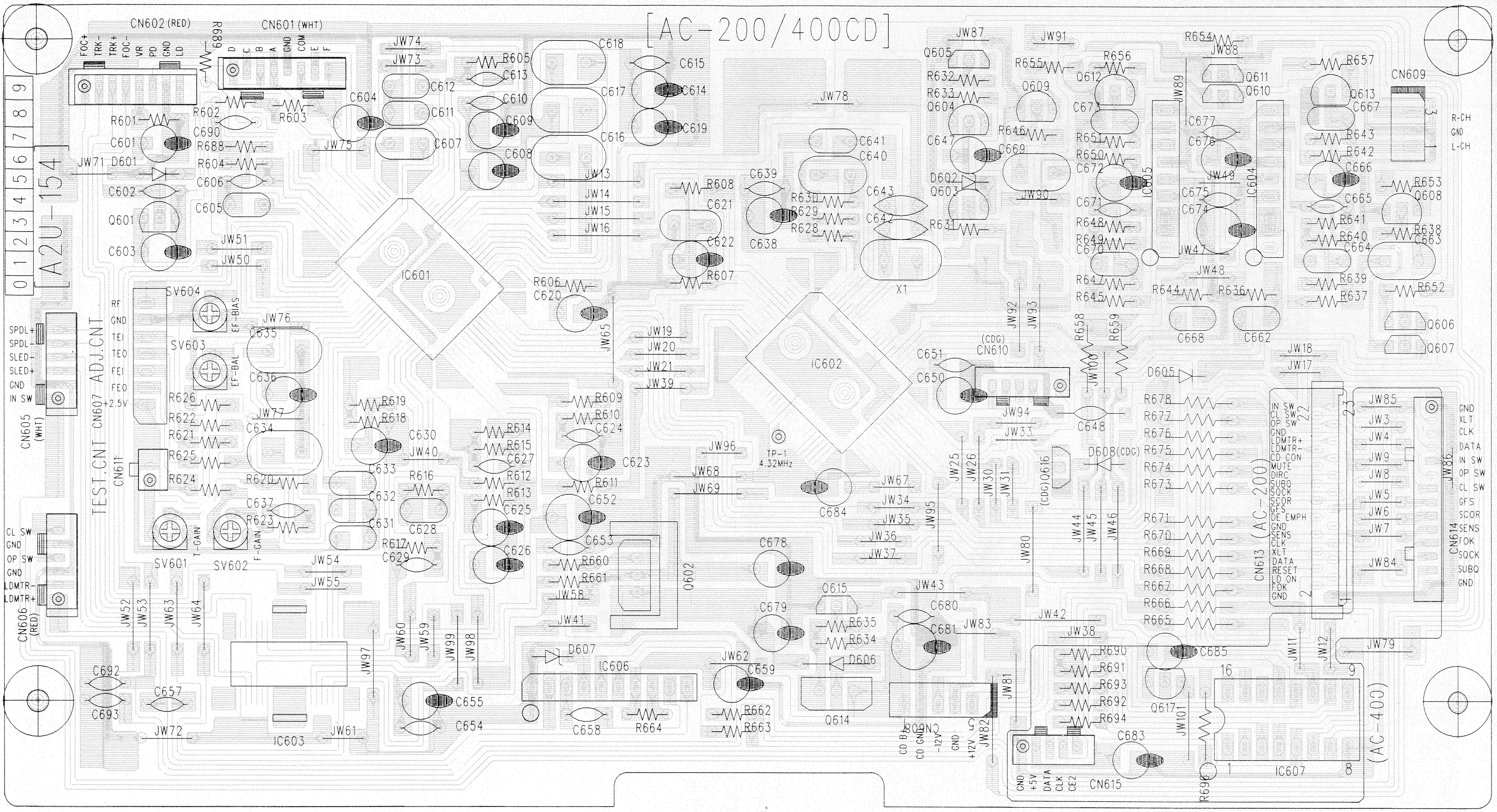
** OPTION LIST FOR VERSION **

VER	E,B,V	S	U5,Y7	U8,Y2	K	A
D101	○			○		○
D102			○			○
D103				○	○	
D104	ADD: 12 HOURS DISPLAY CLOCK DEL: 24 HOURS DISPLAY CLOCK					

VER	E,B	V	S	U,Y	K	A
C130		○				
C151		○				
C152		○				

PCB LAYOUT/CD

CD P.C BOARD (A2U-154)


[AC-200/400CD]
A2U-154
CN602 (RED)
FOC+
TRK-
TRK+
FOC-
VR
PD
GND
LD
R689
CN601 (WHT)
D
C
B
A
GND
COM
E
F
JW74
JW73
R605
C613
C618
C615
C617
C614
C612
C610
C611
C609
C616
C619
C604
C607
C608
R601
R602
R603
C690
C601
R688
JW75
JW71
D601
R604
C606
C602
C605
Q601
C603
JW51
JW50
JW13
JW14
JW15
JW16
JW78
C641
C640
C639
R608
C621
R630
C643
R629
C642
R628
C638
C622
R607
X1
IC601
IC602
R606
C620
JW87
JW91
Q605
R632
R633
Q604
R655
R656
Q609
Q612
C647
R646
C669
D602
Q603
JW90
R631
C673
R651
R650
C672
C671
R648
R649
C670
R647
R645
IC605
JW89
C677
C676
JW49
C675
C674
IC604
JW47
JW48
R644
R636
R654
JW88
Q611
Q610
R657
Q613
C667
R643
R642
C666
C665
R641
R640
C664
R639
R637
R653
Q608
R638
C663
R652
CN609
R-CH
GND
L-CH
SV604
RF
GND
TEI
TEO
FEI
FEO
+2.5V
TEST.CNT CN607 ADJ.CNT
EF-BIAS
EF-BAL
SV603
JW76
C635
C636
R626
R622
R621
R625
R624
JW77
C634
R620
C637
R623
SV601
SV602
T-GAIN
F-GAIN
SPDL+
SPDL-
SLED-
SLED+
GND
IN SW
CN605 (WHT)
CN611
CL SW
GND
OP SW
GND
LDMTR-
LDMTR+
CN606 (RED)
R619
R618
C630
JW40
C633
C632
C631
R616
C628
R617
C629
R614
R615
C627
R613
R612
C625
C626
R609
R610
C624
C623
R611
C652
C653
R660
R661
JW58
JW41
JW19
JW20
JW21
JW39
JW65
JW96
JW68
JW69
TP-1
4.32MHz
C684
JW67
JW34
JW35
JW36
JW37
JW95
C678
Q602
JW54
JW55
JW52
JW53
JW63
JW64
JW97
JW60
JW59
JW99
JW98
D607
IC606
C655
C654
C658
R664
C692
C657
C693
JW72
IC603
JW61
JW62
C659
R662
R663
C679
Q615
R635
R634
D606
Q614
JW43
C680
C681
JW83
CN608
CD B+
CD GND
-12V
GND
+12V
JW82
JW81
C651
(CDG)
CN610
C650
JW92
JW93
JW94
JW33
C648
R658
R659
JW100
JW25
JW26
JW30
JW31
Q616
(CDG)
D608 (CDG)
JW44
JW45
JW46
JW80
JW42
JW38
D605
C668
C662
JW18
JW17
R678
R677
R676
R675
R674
R673
R671
R670
R669
R668
R667
R666
R665
IN SW
CL SW
OP SW
GND
LDMTR+
LDMTR-
CD CON
MUTE
DIRC
SUBQ
SQCK
SCOR
GFS
DE EMPH
GND
SENS
CLK
XLT
DATA
RESET
LD ON
FOK
GND
CN613 (AC-200)
22
23
1
2
JW85
JW3
JW4
JW9
JW8
JW5
JW6
JW7
JW84
JW86
CN614
GND
XLT
CLK
DATA
IN SW
OP SW
CL SW
GFS
SCOR
SENS
FOK
SQCK
SUBQ
GND
R690
R691
R693
R692
R694
C685
Q617
C683
JW101
R696
JW11
JW12
JW79
16
9
1
8
IC607
(AC-400)
GND
+5V
DATA
CLK
CE2
CN615
0 1 2 3 4 5 6 7 8 9

X. INFORMATION OF ICs MI-COM

1. SYSTEM CONTROL MI-COM

H8/3813-FP 100A(IC101)

Pin	I/O	PIN NAME	Function
1	IN	CLOSE SW	CDP
2	IN	OPEN SW	CDP
3	IN	FOK	CDP
4	IN	GFS	CDP
5		AVss	GND
6		TEST	TEST MODE
7	IN	X1	Sub Clock (32.768KHz)
8	OUT	X2	Sub Clock (32.768KHz)
9		Vss	GND
10	OUT	OSC1	Main Clock (6.0MHz)
11	IN	OSC2	Main Clock (6.0MHz)
12	IN	RESET	System Reset Input L:RESET
13		MODE	
14	IN	SCOR	CDP
15	OUT	DATA	CDP
16	OUT	XLT	CDP
17	OUT	CLK	CDP
18	OUT	DE-EMP	CDP
19	IN	SENS	CDP
20	OUT	CD MUTE	CDP H:MUTE ON
21	IN	LD ON	CDP
22	IN	SQCK	CDP
23	IN	SUBQ	CDP
24	IN	XRST	CDP
25	OUT	LD+ (OPMTR)	CDP
26	OUT	LD− (CLMTR)	CDP
27	OUT	T/T LD+	CDP
28	OUT	T/TLD−	CDP
29	OUT	CD ON/OFF	CDP ON/OFF H:ON
30		Vss	GND
31	IN	V3	LCD Bias
32	IN	V2	LCD Bias
33	IN	V1	LCD Bias
34		Vcc	+5V
35	OUT	LCD COM4	LCD Common
36	OUT	LCD COM3	LCD Common
37	OUT	LCD COM2	LCD Common
38	OUT	LCD COM1	LCD Common
39	IN	REC	DECK REC Leaf Switch Input Active:L
40	IN	DECK Ⅱ	DECK Ⅱ Leaf Switch Input Active:L

Pin	I/O	PIN NAME	Function
41	IN	DECK Ⅰ	DECK Ⅰ Leaf Switch Input Active:L
42	OUT	TAPE Ⅰ/Ⅱ	TAPE Ⅰ/Ⅱ Select Output H:TAPE Ⅰ
43	OUT	PB MUTE	TAPE Play Mute Output L:Mute On
44	OUT	REC/PB(NR)	TAPE REC/PB Select Output L:REC
45	OUT	REC/PB(EQ)	TAPE REC/PB Select Output L:REC
46	OUT	REC MUTE	TAPE REC MUTE Output L:Mute On
47	OUT	POWER LED	POWER LED ON/OFF Output H:On
48	OUT	VR-UP	Remote VR UP Output
49	OUT	VR-DOWN	Remote VR DOWN Output
50	IN	OPTION	TUNER BAND, HOUR Select Option
51	OUT	LCD SEG	LCD Segement Output
52	OUT	LCD SEG	LCD Segement Output
53	OUT	LCD SEG	LCD Segement Output
54	OUT	LCD SEG	LCD Segement Output
55	OUT	LCD SEG	LCD Segement Output
56	OUT	LCD SEG	LCD Segement Output
57	OUT	LCD SEG	LCD Segement Output
58	OUT	LCD SEG	LCD Segement Output
59	OUT	LCD SEG	LCD Segement Output
60	OUT	LCD SEG	LCD Segement Output
61	OUT	LCD SEG	LCD Segement Output
62	OUT	LCD SEG	LCD Segement Output
63	OUT	LCD SEG	LCD Segement Output
64	OUT	LCD SEG	LCD Segement Output
65	OUT	LCD SEG	LCD Segement Output
66	OUT	LCD SEG	LCD Segement Output
67	OUT	LCD SEG	LCD Segement Output
68	OUT	LCD SEG	LCD Segement Output
69	OUT	LCD SEG	LCD Segement Output
70	OUT	LCD SEG	LCD Segement Output
71	OUT	LCD SEG	LCD Segement Output
72	OUT	LCD SEG	LCD Segement Output
73	OUT	LCD SEG	LCD Segement Output
74	OUT	LCD SEG	LCD Segement Output
75	OUT	LCD SEG	LCD Segement Output
76	OUT	LCD SEG	LCD Segement Output
77	OUT	LCD SEG	LCD Segement Output
78		N.C	
79		Vcc	+5V
80	OUT	Mute2	Power ON/OFF Output L:ON

Pin	I/O	PIN NAME	Function
81	OUT	SPEED 1	1MECHA PLAY Output (3CDP) H:ON
82	OUT	SPEED 2	2MECHA PLAY Output (3CDP) H:ON
83	OUT	SPEED 3	3MECHA PLAY Output (3CDP) H:ON
84	OUT	P=ON	PRE Mute Output H:ON
85	IN	REMOTE INPUT	Remote Data Input
86	OUT	CSV	NJU-7305 Data Output
87	OUT	CST	LC-7218 Data Output
88	OUT	CK	NJU-7305, LC-7218 Clock Data Output
89	IN	DATA IN	LC-7218 Data Input
90	OUT	DATA OUT	NJU-7305, LC-7218 Output
91	IN	POWER OFF DET.	POWER OFF DET. Input
92		AVcc	GND
93	IN	KEY INPUT. 1	Tact Switch Input
94	IN	KEY INPUT. 2	Tact Switch Input
95	IN	KEY INPUT. 3	Tact Switch Input
96	IN	KEY INPUT. 4	Tact Switch Input
97	IN	T/T SW	CDP Active:L
98	IN	T/T SW	CDP Active:L
99	IN	INNER SW	CDP (LIMIT) Active:L
100	IN	CLAM SW	CDP Active:L

2. IC901 KA9220B (RF + 1SSP FOR CDP)

Pin No.	Port Name	Description
1	AVEE(R)	Analog negative power supply input pin for RF part
2	CPH	Capacitor connection pin of mirror hold.
3	CBH	Capacitor connection pin of defect bottom-hold
4	NC	
5	NC	
6	NC	
7	PFSET	Peak frequency setting pin for focus, tracking compensation and fc (cut off frequency) of CLV LPF.
8	SSTOP	Check the position pin of pick-up whether inside or not.
9	NC	
10	AVCC(S)	Analog positive power supply input pin for SERVO part
11	WDCH	Auto-sequencer clock-input pin (Normal speed=88.2KHz, Double speed=176.4KHz)
12	SMPD	Connection pin of DSP SMPD
13	SMON	Connection pin of DSP SMON, spindle servo ON at "H"
14	NC	
15	TGSW	Providing time constant to change the high frequency tracking gain
16	RTG	Capacitor connection pin to switch the tracking gain of high frequency
17	LFR	Capacitor connection pin to perform rising low bandwidth of focus servo loop
18	FSW	High frequency gain of focus servo loop can be changed by FS3 switch ON or OFF
19	HFGD	Reducing high frequency gain with capacitor connected between pin 18 and pin 19.
20	FSCH	Time constant external pin to generate focus search waveform
21	VREGI	External regulator voltage input pin for VCO
22	ISET	Determining the peak value of focus search, track jump and SLED kick
23	VREG	3.5V Regulator output pin
24	NC	
25	SMEF	Providing an external LPF time constant of CLV SERVO Loop
26	NC	
27	MCK	Clock input pin from micom
28	MLT	Latch input pin from micom
29	MDAT	Data input pin from micom
30	RESET	Reset input pin from micom, reset at "L"
31	LOCK	Pin for operation of the sled runaway prevention function at "L"
32	TRCNT	Track count output pin
33	ISTAT	Internal status output pin
34	AVEE(S)	Analog negative power supply input pin for SERVO part
35	NC	
36	NC	
37	AASC	Auto-Asymmetry control input pin
38	EFMO	EFM comparator output pin
39	SLEN	Non-inverting input pin of SLED SERVO amplifier

Pin No.	Port Name	Description
40	SLEO	Output pin of SLED SERVO amplifier
41	SLEI	Inverting input pin of SLED SERVO amplifier
42	TEST2	Test input pin to change speed mode Normal speed="H", Double speed="L"
43	SPDI	Inverting input pin of spindle servo amplifier
44	SPDLO	Spindle servo amplifier output pin
45	FCE	Inverting input pin of focus servo complifier.
46	FSEO	Output pin of focus servo amplifier
47	TKEI	Non-inverting input pin of tracking servo amplifier
48	TKEO	Output pin of tracking servo amplifier
49	NC	
50	ATS	Anti-shock input pin
51	TZC	Tracking Zero Crossing input pin
52	TE2	Tracking Error Servo input pin
53	TE1	Output pin of tracking Error Amplifier
54	TDFCT	Capacitor Connection pin for Defect Compensation of tracking servo
55	DVCC(S)	Digital positive power supply input pin for servo part
56	FE2	Focus error servo input pin
57	FE1	Output pin of focus error Amplifier
58	FDFCT	Capacitor connection pin for defect compensation of focus servo
59	FOK	Output pin of Focus ok comparator.
60	LDON	Laser diode ON/OFF control pin
61	EI	Feedback input pin of E I-V amplifier
62	EO	Output pin of E I-V Amplifier
63	FBIAS	Bias pin of non-inverting input of focus error amplifier
64	DVEE(S)	Digital negative power supply input pin for servo part
65	RFI	Output Signal of RF summing amplifier is inputed through capacitor
66	RFO	Output pin of RF summing amplifier
67	RF−	Inverting input pin of RF summing amplifier
68	RV	Output pin of (AVCC+AVEE)/2 Voltage
69	CV	Bias input pin of Center Voltage buffer
70	LD	Output pin of APC amplifier
71	PD	Input pin of APC amplifier
72	AVCC(R)	Analog positive power supply input pin for RF part
73	NC	
74	PD2	Inverting input pin of RF-I-V AMP2
75	PD1	Inverting input pin of RF-I-V AMP1
76	F	Inverting input pin of F I-V AMP
77	E	Inverting input pin of E I-V AMP
78	NC	
79	DCC2	Defect bottom-hold output is inputed through capacitor
80	DCC1	Output pin of defect bottom-hold

3. IC902 KS9282B (DSP + 1DAC(16BIT) FOR CDP)

Pin No.	Port Name	I/O	Description
1	AVDD1		Analog Vcc1
2	DPDO	O	Charge pump output for master PLL
3	DPFIN	I	Filter input for master PLL
4	DPFOUT	O	Filter output master PLL
5	CNTVOL	I	VCO control voltage for master PLL
6	AVSS1		Analog Ground 1
7	NC		
8	XIN	I	X-tal oscillator input
9	XOUT	O	X-tal oscillator output
10	WDCH	O	Word clock of 48 bit/SLOT(Normal speed=88.2KHz, Double speed=176.4KHz)
11	NC		
12	NC		
13	DVSS1		Digital Ground 1
14	NC		
15	NC		
16	NC		
17	VREFL1	I	Input terminal 1 of reference voltage "L" (GND Connection)
18	AVDD2		Analog VCC2
19	RCHOUT	O	Right-Channel audio output through D/A Converter
20	LCHOUT	O	Left-Channel audio output through D/A Converter
21	AVSS2		Analog Ground2
22	VREFH1	I	Input terminal 1 of reference voltage "H" (Vdd connection)
23	NC		
24	NC		
25	LKFS	O	The Lock Status output of frame sync
26	SOS1	O	Output of subcode sync signal(S0+S1)
27	RESET	I	System reset at "L"
28	SQEN	I	SQCK I/O Control("L":internal CK, "H":external CK)
29	SQCK	I/O	Clock for output Subcode-Q data
30	SQDT	O	Serial output of Subcode-Q data
31	NC		
32	SBCK	I	CLOCK for output subcode-Q data
33	SDAT	O	Subcode serial data output
34	DVDD1		Digital Vcc1
35	MUTE	I	Mute control Input("H":Mute ON)
36	MLT	I	Latch Signal Input from Micom
37	MDAT	I	Serial data Input from Micom
38	MCK	I	Serial Clock Input from Micom
39	NC		
40	NC		

Pin No.	Port Name	I/O	Description
41	NC		
42	NC		
43	NC		
44	NC		
45	NC		
46	NC		
47	NC		
48	NC		
49	NC		
50	NC		
51	NC		
52	NC		
53	DVss2		Digital Ground 2
54	NC		
55	NC		
56	NC		
57	NC		
58	NC		
59	NC		
60	NC		
61	SEL1	I	GND
62	SEL2	I	GND
63	SEL3	I	GND
64	SEL4	I	GND
65	TEST	I	Test Terminal(L=Normal operating state) GND
66	EFMI	I	EFM Signal input
67	NC		
68	ISTAT	O	The internal status output
69	TRCNT	I	Tracking counter input signal
70	LOCK	O	Output signal of LKFS Condition sampled PBFR/16(If LKFS is "H", Lock is "H", If the LKFS is sampled "L" at least 8 times by PBFR/16, Lock is :"L")
71	PBFR	O	Write frame clock (Lock: 7.35KHz)
72	SMEF	O	LPF time constant control of the spindle servo error signal
73	SMON	O	ON/OFF control signal for spindle servo
74	DVDD2		Digital Vcc2
75	SMPD	O	Spindle Motor drive(Rough control in the CLV-S mode Phase control in the CLV-P mode)
76	SMSD	O	Spindle Motor drive(Velocity control in the CLV-P mode)
77	NC		
78	NC		
79	DSPEED	I	Double speed mode control(H:Normal Speed, L:Double Speed)
80	NC		

ABBREVIATIONS

TUNER

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AFC	Auto Frequency Control	MEMO	MEMOry
AGC	Auto Gain Control	MI-COM	MIcro-COMputer
ALC	Auto Level Control	MIN	MINimum
AM	Amplitude Modulation	MIX	MIXing
AMP	AMPlifier	MPX	MultipleX
ANT	ANTenna	MW	Medium Wave(frequency)
BATT	BATTery	NC	No Connection
BLK	BLocK	NFB	Negative Feed Back
BUFF	BUFFer	OSC	OSCillator
COMP	COMParator	PCB	Printed Circuit Board
DET	DETect(DETector)	PLL	Phase Locked Loop
FLD	FLuorescent Display	Q.D	Quadrature Detector
FM	Frequency Modulation	Rch	Right channel
FREQ	FREQuency	REF	REFerence
GND	GrouND	REG	REGulator
H	High	RF	Radio Frequency
HPF	High Pass Filter	SEG	SEGment
IF	Intermediate Frequency	SELE	SELEctor
IHF	Institut of High Fidelity	SENS	SENSitivity
IND	INDicator	SIG	SIGnal
I/O	In/Out	S/N	Signal to Noise Ratio
JW	Jumper Wire	SSG	Standard Signal Generator
L	Low	STD	STanDard
LCD	Liquid Crystal Display	SW	SWitch : Short Wave(frequency)
Lch	Left channel	THD	Total Harmonic Distortion
LED	Light Emiting Diode	TP	Test Point
LPF	Low Pass Filter	VCO	Voltage Controlled Oscillator
LW	Long Wave(Frequency)	VR	Variable Resistor
		X'TAL	Crystal

COMPACT DISC

ABBRIVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital (Converter)	Mb	Mega Bits
ADC	Analog to Digital (Converter)	MDA	Mortor Drive Amplifier
BCD	Binary Code Decimal	MFM	Modified Frequency Modulation
BPI	Bits per Inch	MM	Mono-stable Multivibrator
CD	Compact Disc	M$_2$FM	Modified Modified Frequency Modulation
CIRC	Cross Interleaving & Reed Solomon Coding	MOD2	Modulo 2(Addition)
CLV	Constant Linear Velocity	MP	Microprocessor
CP	Clock Pulses	MSB	Most Significant Bit
CRCC	Cyclic Redundancy Check Codes	NA	Numerical Aperture
D Level	Decision Level	NRZ	Non Return to Zero
D-A	Digital to Analog (Converter)	NRZ-1	Non Return to Zero Inverted
DAC	Digital to Analog (Converter)	P	Parity Data
DAD	Digital Audio Disc	PAM	Pulse Amplitude Modulation
DEM	Dynamic Element Matching	PCM	Pulse Code Modulation
DPD	Differential Phase Detection	PD	Phase Detector
DSV	Digital Sum Value	PE	Phase Encode
EFM	Eight to fourteen Modulation	PLL	Phase Locked Loop
EX-OR	Exclusive OR	PNM	Pulse Number Modulation
FCI	Flux Changes per Inch	PPM	Pulse Phase Modulation
FIR	Finite Impulse Response	PWM	Pulse Width Modulation
FP	Front Pulse	Q	Parity Data
FPG	Front Pulse Gate	R, R$_1$, R$_2$, etc	Data for Right Channel
F	Frequency of Sampling	RAM	Random Access Memory
GF	Galois Field	RPG	Rear Pulse Gate
H & V (Parity)	Horizonal & Vertical	SCOOP	Self Coupled Optical Pick-up
IIR	Infinite Impulse Response	S & H	Sample & Hold
KB	Kilo Bits	S/N	Signal to Noise Ratio
L, L^1, L^2, etc.	Data for Left Channel	SSG	Standard Signal Generator
LPF	Low Pass Filter	SYSCON	SYStem CONtrol
LSB	Least Significant Bit		

CASSETTE

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi Plex
AR	Anti Recording	NC	Not Connected (No Connection)
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord(RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF(or F.FWD)	Fast Foward	SIG	SIGnal
FLD	FLuoresent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLTage
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitining Diode	X'TAL	crysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed

AMPLIFIER

ABBREVIATION	EXPLANATION
A	Analog
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
COM	COMmon
D	Digital
D/A	Digital to Analog
DAC	Digital to Analog Converter
DAT	Digital Audio Tape recorder
DC	Direct Current
GND	GrouND
L	Left
LED	Light Emitting Diode
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
R	Right
REG	REGulator
REC	RECord
TR	TRansistor
SW	SWitch
V.AMP	Voltage AMPlifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder

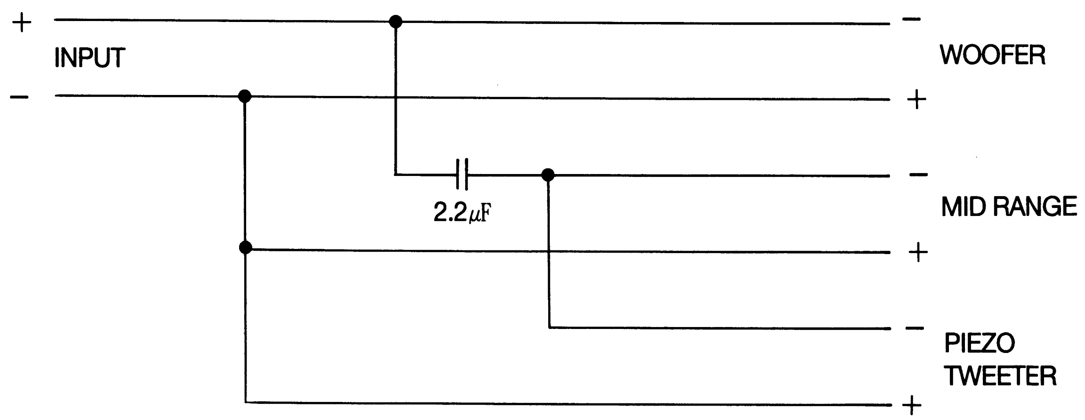
I. SPECIFICATIONS

Model No: SR-200

Type	3Way Bass Reflex
Component	Woofer : TAU-13W03005 Mid-Range : CT-57F12T Piezo Tweeter : PT-20T
Rated Power Input	20W
Maximum Power Input	40W
Rated Impedance	6 Ohm
Dimension	173(W) × 280(H) × 230(D) mm
Weight	3Kg/PC

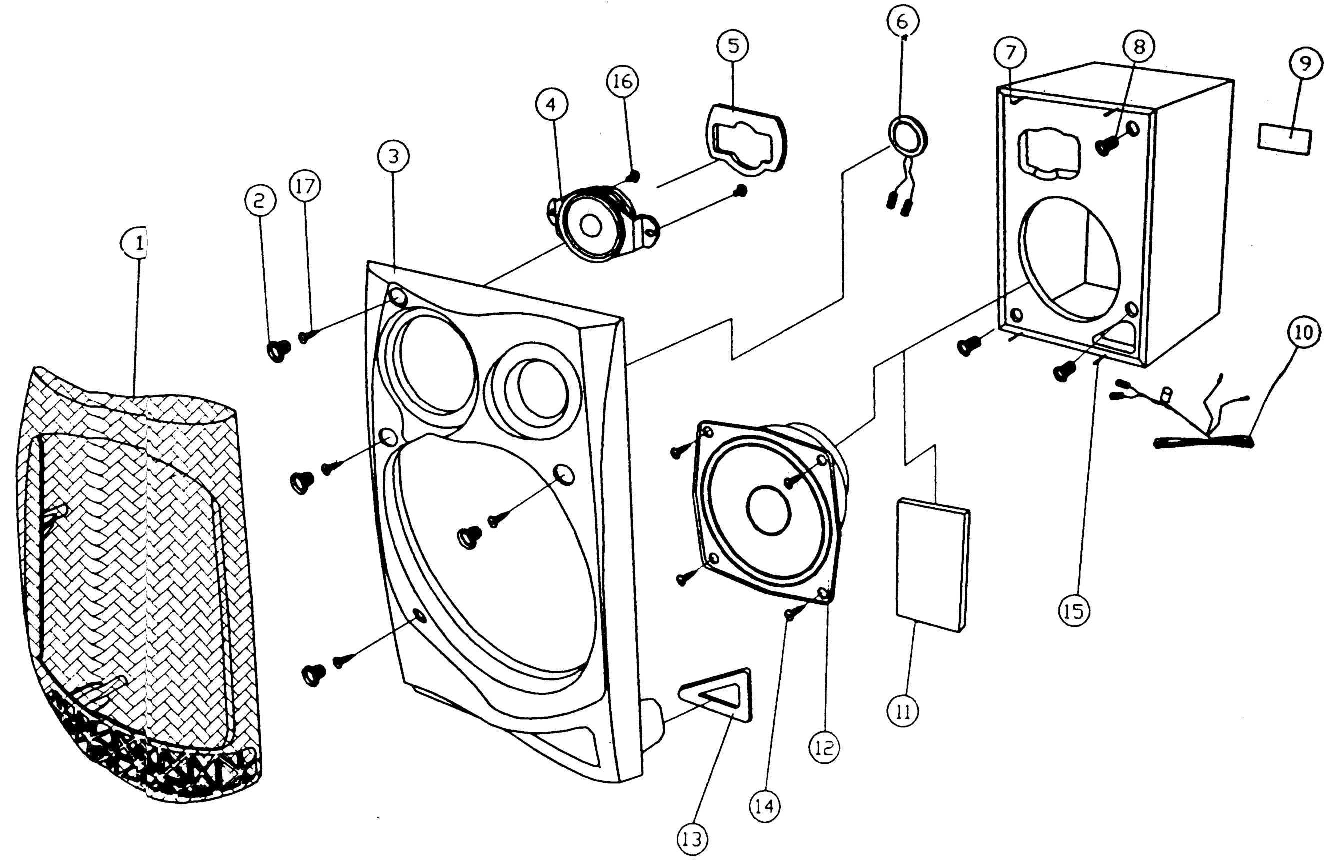
II. SCHEMATIC DIAGRAM

Model No: SR-200


+
INPUT
−
−
WOOFER
+
2.2μF
−
MID RANGE
+
−
PIEZO TWEETER
+

III. PARTS LIST

Model No:SR-200



Ref. No	Part No.	Part Name	Description
1(L)	MJSG-00280-001	FRAME NET(L)	
1(R)	MJSG-00290-001	FRAME NET(R)	
2	MRSG-06230-004	HOOK RUBBER	
3(L)	MJSF-00560-ZZ1	COVER FRONT(L)	
3(R)	MJSF-00570-ZZ1	COVER FRONT(R)	
4	SPKT-00820-A70	SP. TWEETER	CT-57F12T
5	MRSG-07230-004	CUSHION MID	
6	SPPZ-00014-A70	SP. PIEZO	PT-20T
8	MJSG-00470-004	HOOK TAPER	
9(L)	YLSP-BG000-01L	BACK LABEL(L)	
9(R)	YLSP-BG000-01R	BACK LABEL(R)	
10	WSD2-24A9A-251	WIRE SP. CORD(D)	D-20 / 0.12, 2P, 1.9M 2.2μF
11	MRSG-07250-004	SPONGE	150 × 256 × 10t
12	A2UW-F0000-01J	SP. WOOFER	TAU-13W03005
13	MRSG-07240-004	CUSHION DUCT	
14	XSWB-40150-ZB1	SCREW WOOD	FE-ZB BHT1 4 × 15
15	MMSC-00320-004	AIR NAIL	D2 × 20
16	MMSC-00320-004	SCREW COVER	D3 × D9.5W / W × 7
17	XSWB-40180-ZY1	SCREW WOOD	FE-ZY BHT1 4 × 18